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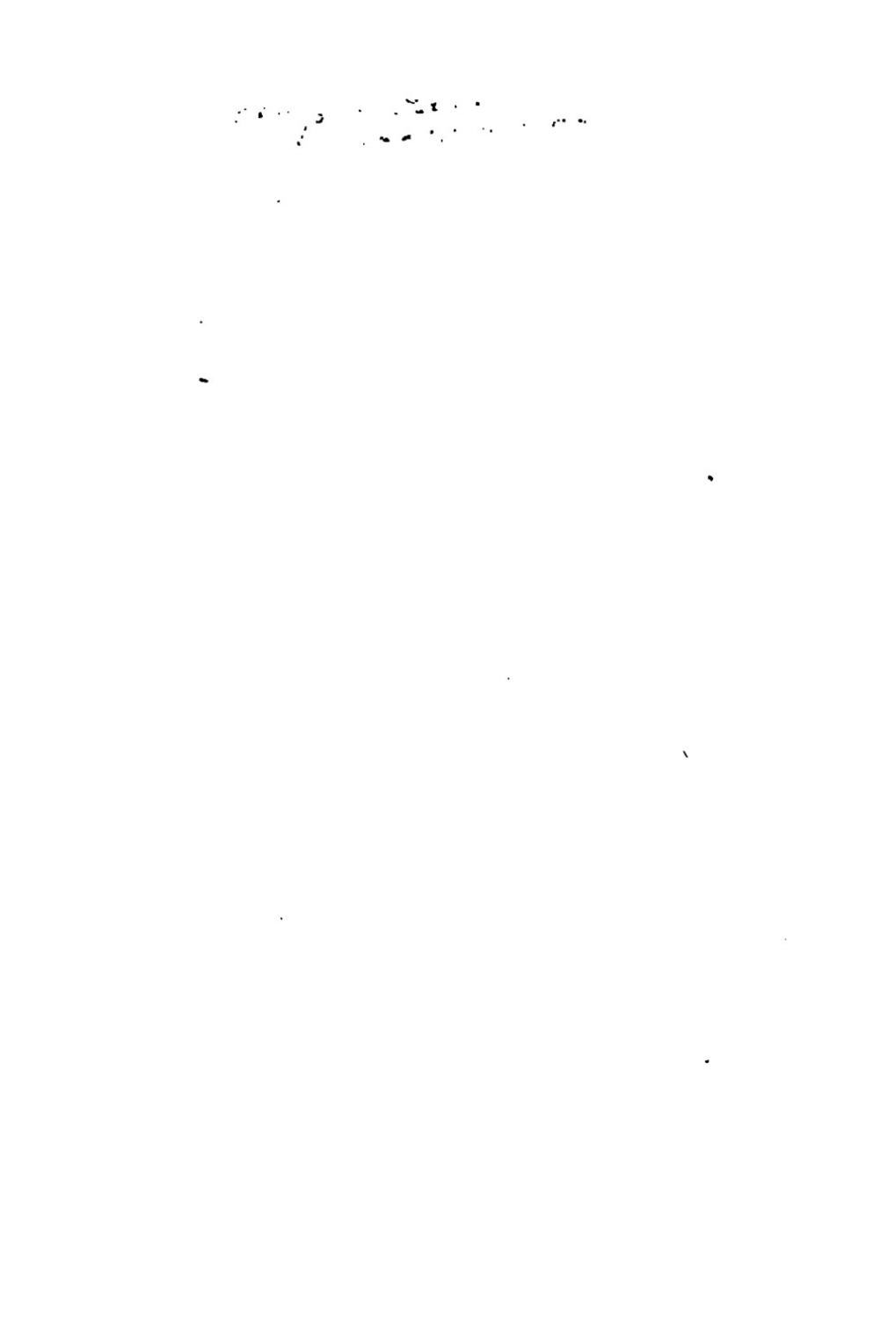
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OF ECONOMICS
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**ELEMENTARY PRINCIPLES
OF ECONOMICS**



ELEMENTARY PRINCIPLES OF ECONOMICS

TOGETHER WITH A SHORT SKETCH
OF ECONOMIC HISTORY

BY

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THE MACMILLAN COMPANY

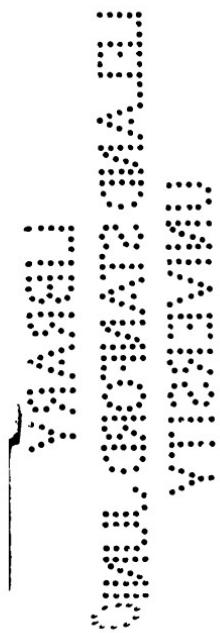
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1905

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Set up and electrotyped. Published May, 1904. Reprinted
November, 1904; July, 1905.



PREFACE

IN offering this text-book to teachers and students of economics, the authors feel that a brief word of explanation and suggestion may afford help in judging the quality of the book as well as in the use of the book, should favoring judgment result in its adoption for class-room work.

It has been the aim of the authors first of all to make the book teachable. In choice and rejection of substantive and illustrative material and in its arrangement; in the form of the chapters, paragraphs, sentences, and words; in all that can affect the ease or difficulty of conveying an understanding of economics to the beginner, this complicated quality of teachableness has been earnestly and constantly sought.

Fortunately for the welfare of the science of economics, there is more or less disagreement among economists as to many points of theory. But manifestly an elementary text-book on the subject is not a place in which conflicting views should be presented and discussed, even if space would permit. Nor have the authors wished to use the pages of the book for the propagation of views in which they might chance to differ from other economists. It

has seemed best to regard constantly the purpose of the book as a text, and hence to subordinate individual opinion to the general good of the student. Here, as in many another question of choice, Pope's rule may well apply :—

“Be not the first by whom the new is tried,
Nor yet the last to lay the old aside.”

In the main, therefore, and so far as the authors have been able, they have presented the outlines of theory in the form in which they are to-day most generally accepted by economists, leaving for later and advanced study the conflicting assumptions and arguments and points of view of economists who may be paving the way for the most acceptable text-book of a coming decade.

An examination of the book will show that scattered passages, amounting in the aggregate to many pages, have been printed “solid,” *i.e.* without the interlinear spaces regularly used. Such are the passages which, either from their greater difficulty or from their subsidiary character, may best be omitted by a teacher pressed for time. Moreover, for classes in which the time limits are too narrow to permit careful study of the whole text, it may be found expedient to omit Book IV, on Public Finance.

It is perhaps unnecessary to add the word of caution that the summaries and questions at the close of the chapters may easily become a hindrance rather than a help to real thought and study if the teacher permit himself or

his class to fall into slavish reliance upon them. Like the references to collateral reading, the questions and summaries are to be used as starting-points and guides to further study and discussion.

It has been the hope of the authors, moreover, that the material carefully elaborated in the appendixes may not only help to guide both teacher and class during the period of the formal study of the book, but may also encourage and direct the student in the after days of his professional or business or political life.

RICHARD T. ELY.

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BOOK I

INTRODUCTORY

CHAPTER I

PRELIMINARY REMARKS ON THE NATURE OF ECONOMICS

ALTHOUGH the whole book which follows is but an expanded definition of economics, the student who is about to enter upon a study of the subject may well wish to have explained to him in advance, at least in rough outlines, what is the field into which he is about to enter. At the outset, therefore, let us attempt to frame some idea of the nature of the science and of the group of sciences with which it is most closely connected. Later, we can return to the subject, and, by summarizing the results of our study, arrive at a more complete definition.

The Place of Economics among the Social Sciences.—First of all, economics is a social science. That is, it deals with man in his relation to society. But there are other social sciences besides that which we are about to study, among which may be mentioned political science and sociology.

The question therefore naturally arises, How is our science distinguished from the others? To answer this question, we must consider more closely the different aspects under which society may be viewed. From the

first, men in society have been busy in various lines of effort, which for convenience we may group as follows : language, art, education, religion, family life, social life,—in the narrow sense of that term,¹—political life, and economic life. It is with the last of these eight spheres of human activity that our science has to deal. By the term “economic life” is meant, roughly speaking, that part of human activity which is devoted to getting a living.

A peculiar feature of these activities is that they are all *collective*; that is, they are activities which one man cannot well carry on alone. In the case of family and political life and some of the others this is at once obvious. Careful examination shows it to be true of them all. It is for this reason that the sciences which deal with them are called social sciences.

Preliminary Definition of Economics.—Economics, then, *is the science which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man.* It deals with all those facts about society that result from man’s effort to get a living. The wealth-getting activity itself we call economic activity. The economic life, or the relations to which the economic activity gives rise, we may call by the simple word “economy.” With this understanding, we may say that economics is *the social science which deals with the economic life, or the economy, of man.*

The Economic Unit.—If we keep in mind this meaning of the term “economy,” we shall see that there are economies of various sorts. Thus, the economy of the ancient Greek household with its slaves and dependents is different from

¹ We mean what would popularly be designated as social intercourse,—giving and receiving calls, conversation, etc. When we speak of going into society, we generally employ the word in this narrow sense.

that of the mediæval city or of the modern nation. In this book we study the economy of the nation as a unit, with individual, household, city, and state (in the narrow sense) as subordinate economies. We are coming, however, to regard the whole world as an economic unit.

The eight different human activities which have been enumerated cannot be entirely separated in thought any more than they are actually separate in real life. Thus legislation, though it belongs primarily to the province of political science, has an intimate bearing on economic life. Again, industry in Russia is seriously hampered by the frequent recurrence of saints' days, which have therefore great economic importance ; but these have primarily to do with religion, not with economics. In the same way, economic life is dependent upon all the other groups of human activity.

Final Definition of Economics. — It is evident, then, that a complete definition of economics must be made broad enough to take note of this fact. We may sum up all these considerations in a final definition, as follows : *Economics is the science (1) which treats of those social phenomena that are due to the wealth-getting and wealth-using activities of man; and which (2) deals with all other phases of his life in so far as they affect his social activity in this respect.*

SUMMARY

1. Economics is a social science.
2. Each great department of social life has its appropriate science.
3. Economics is the branch of social science that deals with the phenomena to which the wealth-getting and wealth-using activities of men give rise.
4. Economics deals also with all the other social phenomena in so far as they affect economic activity.

QUESTIONS

1. Into what different groups may man's social activities be divided?
2. With which group does economics primarily deal? What concern has it with the others?
3. What have the different groups in common?
4. What is economics?

CHAPTER II

THE PRINCIPAL DIVISIONS OF ECONOMICS

ECONOMICS is a science which covers so wide a field that it has been found desirable to divide it into parts, each of which is often treated by writers in separate works or in separate volumes of the same work. It may help the student to have outlined for him, in advance, the divisions as they will be presented in this work.

First of all, it has been deemed well to present to the student in the opening chapter an idea of what the science is, and to show him, as is being done in the present chapter, what are the main topics with which the science is concerned. In another introductory chapter there is presented a discussion of some of the fundamental institutions in our social order.

In the second place, it is thought advisable to give in a few chapters a skeleton outline of the economic history of mankind, with more particular attention to those late developments in English and American economic history which have given rise to existing economic conditions. This part of the subject is often omitted from elementary text-books, and therefore a word of explanation is here in place.

Few students undertake the study of economics without having pursued courses in history; but the histories usually studied in schools are devoted in great part to

other than economic considerations, and are written from a different viewpoint than that which should be ours in our present study. It is of the utmost importance that the student should approach the study of present economic conditions with the historical spirit. As the chapters in economic history will show, social and economic institutions are not permanent, but constantly changing; and to understand aright what is, we must know whence it has developed, and, so far as we can, whither it is tending. Moreover, the study of economic history should show the student, as perhaps nothing else can, that great changes in the economic condition of a nation or a class do not come about in a moment at the command of an individual or of a great number of men organized in a state, though the action of the individual and of the state are powerful forces.

The way will thus be made clear for that which is more commonly presented in text-books under the name of economics or political economy. An analysis of economic phenomena at any time shows that these may be divided for purposes of clearer study into four main parts: first, those connected with man's consumption of goods, or, in other words, with the satisfaction of his wants; second, those connected with the production of goods; third, those connected with the exchange or transfer of goods among men; and fourth, those connected with the distribution of the income of society among the individuals, classes, and factors of production which coöperate to create that income. By dividing thus the general subject of economic theory, we are enabled to look at man's economic life from four points of view. The four divisions which we have indicated are usually treated under the following head-

ings: consumption, production, transfers or exchange, and distribution. Following the practice of several recent writers, we shall discuss them in the order given.

Certain socio-economic problems of great present interest will, on account of their special importance, be treated at considerable length in those divisions of the general subject to which they have a logical relation. Thus, under the head of transfers or exchange, we shall discuss the subjects of monopolies, bimetallism, and protective tariffs, and under the head of distribution, many of the practical problems concerning labor and wages.

Finally, the financial relations and operations of government, national, state, and local, are of a nature so important to the welfare of the citizen, and in some respects so peculiar, that it is thought well to treat them separately in chapters devoted to the subject of public finance.

SUMMARY

1. For convenience of treatment, economics is usually divided into several different fields of study.
2. The present book begins with an introduction explaining the nature and scope of the science.
3. A sketch of economic history is given to prepare the student for a better understanding of present conditions and problems.
4. Economic theory is presented under the four general headings: consumption, production, transfers (or exchange), and distribution.
5. A short presentation of the subject of public finance is added to give the student a more complete idea of the nature of economics.

QUESTIONS

1. What subjects are discussed in the introductory chapters of this book?
2. Why is it thought well to include economic history?

3. What are the usual main divisions of economic theory? In what order are they given in this book?
4. Of what does public finance treat? Why is it included in this book?

LITERATURE

A comparative study of general treatises with the object of noting differences in the order of treatment will be found of service in fixing in the student's mind the nature and scope of economics.

CHAPTER III

FUNDAMENTAL INSTITUTIONS IN THE EXISTING SOCIO-ECONOMIC ORDER

IN every civilized State to-day there are certain conditions under which men perform their economic activities, but which are so fundamental in their nature that we do not often stop to consider them. So deep lying are they and so long established that we easily fall into the error of thinking of them as necessary to the very existence of society under all conceivable circumstances. Yet careful consideration will convince the student that this is far from the case. Let us, then, consider in detail some of the more important of these fundamentals.

I. PRIVATE PROPERTY

The right of private property, for instance, is so fundamental in our modern civilization that we hardly think of it as a creation of society, maintained only by constant vigilance on the part of the State, and subject even now to slow and gradual modification. Still less, perhaps, has it ever occurred to most of us as a right that is open to question. The reason for this attitude of mind is that people are ruled in great measure by custom rather than by the light of history and of reason. When any customary right has spread very widely and become deeply rooted in society, men fall into the error of calling it a "natural

right." By this term they usually mean that the right is "established by nature," and hence not to be called in question. But in reality there are no such rights. All true rights are rational—rights which can show good reason for their claims, and can justify their existence on the ground that they promote human welfare.

Yet it must be noted that the very fact of the long-continued existence of any social institution furnishes strong presumptive evidence that the institution has ministered to social welfare. Therefore those who appeal to the law or to public opinion to overthrow or to abate the force of the institution have to bear the burden either of showing that social conditions have so changed as to destroy the beneficent operation of the institution, or of offering very strong evidence that some other institution would better subserve the end.

Beginning of the Right of Private Property. — On looking into the history of private property, we find in the first place that it has not always existed among men. The savage at first owned nothing. Doubtless, even in very early times, when the primitive man had caught or killed an animal, he considered it more or less his, though even in such cases it was the common property of his family or tribe rather than the exclusive property of the individual. From insignificant beginnings, the right or feeling of ownership has grown, including more and more things and dividing the ownership more and more, until at last nearly everything is owned and nearly every one owns something. Not until a rather advanced stage of civilization had been reached did land become property, and even to-day the last forms of tribal ownership of land have not everywhere given place to individual property.

Strengthening of the Right. — In the second place, it is only in comparatively recent times that private ownership has been either so exclusive or so extensive as it is at present. It is not many centuries since a Scottish clan held the right to the territory it occupied so absolutely that no chieftain, however powerful, could abridge the right. To-day, there are beautiful tracts of country in Scotland which have been almost stripped of their agricultural population because the owners, descendants of the old chieftains, have preferred that game rather than men should get a living on their estates. Slowly, however, a reaction has set in, and most nations are now beginning to extend their public claim to game and fish, and are refusing to allow so absolute a right of private property.

Limitations to the Right. — In the third place, we find that even to-day private property has certain sharp limitations which indicate whence it springs and from what source it draws its being. The State, representing the people, even now says to the individual citizen, "Thus far shalt thou go, and no farther." By its action it shows that it is the grantor of private rights, and that it may withdraw them whenever such a course will be to its advantage. Let us consider some of these limitations.

Limitations to Private Property imposed by the State in its Own Behalf. — 1. *Taxation.* The first of these limitations exists in the taxation of private property, which from one point of view may be regarded as simply the taking by the State for its own uses of a part of what it has left to the private ownership of its citizens. Taxation, as understood to-day, is a comparatively recent activity of the State. During the Middle Ages the right of the State to take private property for its support was stoutly opposed,

and there was a strong tendency to regard all taxation as extortion. To-day the right of taxation is almost universally conceded. Taxation is the most extreme limitation imposed upon the right of private property by the State in its own behalf.

2. *Eminent Domain and Requisition.*—A second limitation exists in the right of the State to appropriate to itself specific pieces of property with direct compensation to the private owner. This right is exercised especially in time of war, as when the nation for its military needs takes cattle for the subsistence of its troops or wagons for their transportation. Such an assumption of proprietorship is known as requisition. But in times of peace the government often takes for its own purposes, with due compensation, land or other property, under the exercise of what is known as the right of *eminent domain*,—words which in more common language simply mean ultimate ownership.

3. *Fines, Forfeits, and Escheats.*—Fines, imposed and collected by government under the exercise of its police power, form a third clear limitation upon the absoluteness of private property. This limitation and others closely connected with it, such as forfeits and escheats, call for no explanation here.

Limitations directly in Behalf of Individuals.—The three limitations just described are such as the State sets up directly in its own behalf. But there are still others, enforced by the State not directly for itself but for individual citizens. (1) The first is *the exercise of the right of eminent domain in behalf of individuals or corporations*. If a regularly chartered railway company is unable to make terms directly with the owner of land over which

it proposes to lay its tracks, it can secure possession by appealing to the government, which compels transfer of the property for compensation. It should be noticed, however, that in all such cases it is presumed that a public purpose is to be subserved by the company.

Moreover, there is a vast system of limitations upon the use, or rather the abuse, of private property, which are designed to prevent the individual from injuring himself or others. We need not enter into an extended description of these limitations. Generally speaking, (2) *no man may use private property to maintain a public nuisance.* Nothing is more fallacious than the idea that the right of ownership allows a person to do as he pleases with his property. It is true that rights of private property have sometimes been so defined as to permit many abuses to go unpunished, but it has been the tendency of the State so to limit the rights as to exclude abuses. Whenever any given right has proved generally unfavorable to the welfare of society, government has modified or abolished that right, or, failing to do so, has endangered its own stability.

II. GUARANTEED PRIVILEGES

Closely connected with the general subject of property is the legal arrangement whereby exclusive privileges are awarded in return for services to society. Such privileges really become a special form of private property, and have particular importance in determining the distribution of wealth, although they are not without importance also in the production of wealth, on account of the stimulus which the hope of such privileges may give to invention and improvement.

Under this head come *trade-marks*, *copyrights*, and *patents*. The laws regulating *trade-marks* give property in the design which characterizes some particular product. In the case of *copyrights* and *patents*, authors and inventors are granted exclusive rights in their productions for a limited period.

Most modern States proceed on the assumption that the public interest will be furthered by granting these exclusive privileges, and on the whole, the policy has probably been justified by its results. Yet experience has shown that neither patents nor copyrights should be given without limitations. Patents should not be given on light and trivial grounds, nor for unlimited or over-long periods. Moreover, owners of patents should be made by law either to use them or to allow them to lapse, and to grant to others the right to use them on payment of a reasonable royalty. Similarly, copyrights are carefully guarded in the interests of the public. The law in a general way aims to give the reward of services to the author, and avoids allowing a reward for services which others have performed.

III. CONTRACT

Another fundamental institution in our present industrial society is contract. Some sort of contract lies at the basis of all associated action. That this condition of associated activity should be maintained by the State can hardly be doubted, yet even the right to contract has its limitations resting upon human well-being. To-day legislation provides (1) who may and who may not contract, (2) for what purposes valid contracts may be made, and (3) under what forms and conditions they must be made

to be valid. Experience justifies this regulation. Children, for example, cannot as a rule make contracts that will bind themselves, because they are not presumed by the law to have the requisite knowledge and judgment. Again, agreements which are clearly opposed to public policy, such as an agreement entered into for the commission of a crime, are invalid and would not be enforced by the courts.

IV. THE RIGHT TO ESTABLISH PRIVATE ENTERPRISES

The right to establish private enterprises is another fundamental one which is nevertheless changing and changeable. It is only within the last century that the right has come to have its present wide scope, especially in the case of corporations. Many restrictions still exist, as in the case of the liquor traffic. It is even open to serious question whether society has not gone too far in our own country in the direction of granting freedom to establish private business.

V. PERSONAL LIBERTY

Personal liberty or freedom, including (1) *the right to move from place to place* at pleasure, and (2) *the right of acquisition*, is an institution which we are perhaps most likely to regard as necessary and natural under all circumstances. Yet here again we have the case of a right which has been very slowly acquired by society. Moreover, it never has been, is not to-day, and probably never can be, an unlimited right. It is the endeavor of the State to equalize human liberty, not to make such liberty absolute, for that would be impossible. The question, then, is not whether we shall limit liberty, but how we

can so limit it that we may secure a maximum of liberty for all.

The student must think this out fairly and deliberately, casting out from his mind every argument based upon "natural rights." Only when he has substituted therefor the rule of human welfare will he be prepared to study economic questions rationally and scientifically.

For the maintenance of these fundamental conditions of the existing social order which we have described, we are dependent upon the State. No other instrument of society is adequate to the task. The maintenance of these foundations, if they are to be maintained at all, can be accomplished in no other way. When the State attempts this and little more, its policy is said to be passive. When the State goes far beyond this in endeavors to promote the general welfare, its policy is said to be active.

Conclusion.—Let us remember, then, that the most fundamental institutions are not unchangeable, but that we can discover their beginnings in history, and can trace their development through manifold and unceasing changes to their present form. Let us remember, too, that as change has marked the past, so it must mark the future; and that the institutions which we have described, fundamental as they are, are not "natural," but derive their rational justification from their power to promote human well-being. Bearing these facts in mind, we may free ourselves from two opposing errors, from which many false views of our future take their rise. On the one hand, we may hope to escape the pessimism that springs from looking at the existing order of things as unalterably determined; and on the other hand, we may escape

that unreasoning and unreasonable optimism which belittles the importance of our fundamental ideas and institutions, and which inconsiderately hopes to change these in the twinkling of an eye, by the simple expedient of a majority vote.

SUMMARY

1. There are certain ideas and institutions in our social order which are so fundamental that we come to regard them as "natural" and necessary.
2. Among these fundamentals are private property, guaranteed privileges, contract, the right to establish business enterprises, and personal freedom.
3. Far from being natural or necessary to every state of society, these rights have always been limited, have always been changing, and have their origin and justification in social expediency.
4. History warns us neither to overestimate nor to underestimate the importance of these institutions. They may be changed, but they cannot be changed easily or quickly.

QUESTIONS

1. What is private property? Why is it often held to be a right which is not open to question or discussion?
2. What is the basis of human rights? Are any of them exempt from the need of examination or justification?
3. What is the historical origin of private property?
4. What limitations does the State set to private property? Is the present tendency toward an increase or a decrease of these limitations?
5. Ought private property to be retained? If so, why and how far?
6. What is a trade-mark? A copyright? A patent? Discuss their purpose and results.
7. What limitations are properly set to the right of personal freedom? Of what does the right to personal freedom consist?
8. Discuss the idea of "natural rights."
9. From what two opposed errors ought a true idea of fundamental institutions to guard us?

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BOOK II

A BRIEF SKETCH OF ECONOMIC HISTORY

CHAPTER I

INTRODUCTORY

What Economic History Is.—In beginning the study of economic history it will be well for us to recall what has been said in a preceding chapter as to the nature of the subject which is before us. The history of literature, the history of government, the history of religion, and other histories which the student can readily call to mind have one thing in common: they are all of them histories of man. Each of them, however, treats of man in one particular line of his activities. It is the same with economic history. Its subject is man, but it deals primarily, not with his government or his worship, but with his efforts to get a living. Many who have held a narrow view of our subject have objected sneeringly that it is but a “bread and butter” science. Even if this were a just view of the subject, economics would still be worthy of our most careful study. But as a matter of fact, it means much more than bread and butter. It is plain on a moment’s reflection that every kind of activity, however sublime, depends to some extent upon material things. And so this subject of ours—man in his effort to acquire and to use material things, to satisfy his wants, or, in

other words, to get a living—is of interest to everybody, and is closely connected with every kind of human effort.

General Survey.—At the beginning of our review of the history of man's economic efforts we are struck by the fact that all the manifold ways of getting things may after all be reduced to two: man must either *find* things or *make* them. Of course the two ways often combine in varying proportions, and in our own experience the two are constantly shading into each other; but for purposes of present clearness we may well make the distinction. Now, uncivilized man *finds* the things he uses; civilized man adds to *finding* the art of *making*. Indeed, *material civilization consists largely in wanting many things and in learning how to make and to use them.*

The economic activity of man before the dawn of recorded history is enshrouded in so much of mystery that we can do little more than conjecture regarding it. We have evidence to show that prehistoric man obtained his material goods, as the beasts do, simply by taking possession of natural products, exercising little or no control over nature, and protecting himself from the elements only by caves or by the simplest contrivances.

Historical Stages.—The period of civilization just mentioned is something so remote, something about which our knowledge is so uncertain and fragmentary, that we are scarcely able to treat it as a separate stage in economic evolution at all. We may, therefore, pass directly to a study of the regular stages, beginning with the time when men *had learned to kindle fires, to eat meat, and to live in*

some kind of political communities, however imperfect. Starting thus, we divide the course of man's economic development — regarding it from the standpoint of his means of procuring goods — into five stages, as follows : —

- (1) The hunting and fishing stage.
- (2) The pastoral or nomadic stage.
- (3) The agricultural stage.
- (4) The handicraft stage.
- (5) The industrial stage.

The evolution of economic society may, from a somewhat different but not antagonistic point of view, be divided into the four following stages : —

- (1) The stage of independent economy.
- (2) The stage of town economy.
- (3) The stage of national economy.
- (4) The stage of imperial or even of world economy.

Again, looking at the same development from the standpoint of man's ways of exchanging goods when produced, we may similarly distinguish the three following stages : —

- (1) The stage of "truck" or barter economy.
- (2) The stage of money economy.
- (3) The stage of credit economy.

Still again, we may view economic evolution from the point of view of wage-earning labor, going back to the period when enemies taken in battle were slaughtered, and passing on to the time when the lives of the conquered were spared in order that the victors might hold the vanquished as slaves. We then have the four following stages : —

- (1) Slaughter of enemies taken in battle.
- (2) Slavery and serfdom, along with some free labor, the latter governed by custom operating through contract.

(3) Free labor, regulated by individual contract, but with increasing resort to group contract, and with legal protection of labor. Slavery gradually disappearing.

(4) Collective bargaining, regulated increasingly by statute.

These classifications may now be brought together in a single table, in which the historical relation of the various classifications will be shown, the first classification given — the one in the second column of the table — being regarded as the principal one.

ECONOMIC STAGES

I. STAGES IN THE HISTORY OF LABOR	II. STAGES IN THE HISTORY OF PRODUCTION	III. STAGES IN THE HISTORY OF THE DEVELOPMENT OF THE ECONOMIC UNIT	IV. STAGES IN THE HISTORY OF TRANSFERS OF GOODS
1. Slaughter of enemies.	1. The hunting and fishing stage.	1. The stage of independent economy.	1. The stage of barter economy.
2. Slavery and serfdom, along with free labor, regulated by custom, operating through contract.	2. The pastoral stage. 3. The agricultural stage. 4. The handicraft stage.	2. The stage of town economy.	2. The stage of money economy.
3. Labor regulated by individual contract, with increasing use of group contract, and legal protection of labor. Slavery disappearing.	5. The industrial stage.	3. The stage of national economy.	3. The stage of credit economy.
4. Collective bargaining, regulated increasingly by statute.		4. The stage of world economy.	

It is not to be understood that these stages are in any of the classifications distinctly or sharply separated, that we can fix definite dates at which men consciously abandoned one way of obtaining goods, or of exchanging them, and passed to another method. The transition from one stage to another is slow and almost imperceptible. Those students of this book who have studied botany or zoölogy will understand the illustration when we say that the stages shade into one another as do the varieties of closely related genera in the case of living organisms. Moreover, it must not be understood that all of the features of an earlier stage pass away when men enter into the newer way. In many cases all of the features of the old survive and even have an increased importance in the later stage. Thus trades and commerce are to-day carried on on a far larger scale than they were in the handicraft stage itself; but since then new and important features of economic life have developed to give a new character to the age, and we seek to indicate this change by some distinctive title. To-day, in the United States, we can find illustrations of nearly all the stages of evolution that have been mentioned. Barter, or truck, is still the commonest mode of exchange in some parts of the country, and, indeed, there are comparatively few places in which credit transactions have in the main taken the place of money transactions. It is interesting to observe that, owing to the progressive Western movement of the population of the country, the stages in the history of man's productive efforts appear in regular order from west to east. Thus the country of the frontier is occupied by hunters and trappers; next are great stretches of country which are almost entirely devoted to grazing; farther east, agricul-

ture predominates; trades and commerce are active especially in the country east of the Mississippi; manufacture on a large scale is found especially in the North Atlantic and North Central groups of States; while finally the large industrial combinations which mark the latest step in development are confined, at least as far as their legal residence is concerned, to the Atlantic seaboard.

Our study of the history of man's economic development may conveniently take the form of a study of the various stages which have been mentioned, and more especially of the stages in the history of man's productive efforts.

SUMMARY

1. Economic history is the history of man in his efforts to get a living; that is, to get the things needed for all his activities of body and mind.
2. Uncivilized man finds things; civilized man makes them.
3. The history of man from the standpoint of his productive efforts may be divided into five stages: the hunting and fishing stage, the pastoral, the agricultural, the handicraft, and the industrial stage.
4. Other subsidiary classifications are based upon the history of transfers, the history of labor, and the history of the development of the area of the economic unit.

QUESTIONS

1. What is included in the term "living"? Mention some economic elements in religious work. In education. In politics.
2. What two ways are there of getting things? In which way can society get more?
3. What do we know of the economic life of prehistoric man?
4. What are the five stages of economic progress from the standpoint of production? The three stages from the standpoint of transfers? The four stages from the standpoint of labor? The

- four stages from the standpoint of the size of the economic unit?
5. What can you say of the distinctness of separation of these stages?

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CHAPTER II

EARLY STAGES OF INDUSTRIAL DEVELOPMENT

I. THE HUNTING AND FISHING STAGE

General Characterization. — In the first stage of man's economic development, nature is the great factor in production. There is little labor and less capital. Man contents himself with what nature gives him, his labor taking the form of appropriating these gifts. He has not progressed far in subjecting animals to his will; still less does he attempt to improve useful animals by breeding. Transforming natural products by his handicraft is but an insignificant part of his activity. Not even does he store up goods in time of abundance against a future time of dearth. The American Indian, where he has not been elevated by contact with a higher civilization, is a good illustration of this stage of economic progress.

Economic activity in this stage is in a high degree *isolated*. Hence this stage, together with the two succeeding stages, is said to belong to the period of *independent economy*. In other words, the work of getting goods is not carried on, as with us, by great groups of men scattered in many countries, but is done mainly in the single family, each family producing most of the things which its members consume. For this reason, too, there is little exchange or transfer of goods, though there is no un-

willingness to make exchanges if opportunity offers to secure by exchange something new and attractive.

There being little exchange of products or division of labor, it follows that there are no economic classes and no industrial conflicts. The greater part of property, including all land, is the common possession of the social group, private property being confined to arms of war, household goods, and the immediate rewards of labor.

Hunting Tribes.—Although we have grouped the hunting and fishing tribes together as being upon the same plane of economic evolution, we can find certain clear differences between those who live primarily on the products of the chase and only secondarily upon fish, and those who reverse this order. Among hunting tribes we find the work and life leading to a high development of such qualities as cunning, endurance, and bodily strength, but not to a development of technical skill nor to a reflection upon the processes of nature. Their condition of life prevents the possibility of any but a sparse population. It has been estimated that in a population living solely upon the products of the chase each hunter requires for his support more than fifty thousand acres, or seventy-eight square miles—an area which in the state of Rhode Island at present supports on an average nearly thirty-two thousand people. It follows from this need of large territories that war becomes an economic necessity whenever there is not an abundance of unoccupied land. This same condition of things gives us one of the causes of cannibalism. The pressure of increasing numbers bringing the people continually to the verge of starvation, they fall little by little into the custom of eating enemies taken in war.

Fishing Tribes. — As might be expected, primitive tribes of fishing people are more peaceable than are the hunting tribes. Their population is denser, both because of their more peaceable disposition and because of the fact that a smaller area is sufficient for the support of a given number of people engaged as they are. Having less need of frequent migrations to seek new food resources, they naturally form larger accumulations of capital. They build dwellings of a more permanent character, and construct boats and fishing implements. On the whole, we may say that the power of man over nature is greater among fishing than among hunting tribes. Primitive fishing tribes can now be found only in the frigid zone.

II. THE PASTORAL STAGE

General Characterization. — Between uncivilized man, who uses what he *finds*, and civilized man, who *makes* what he wants, there is a middle ground. The man of this middle period neither depends alone on what he can find, nor makes things to any great extent, as we commonly think of making things; but rather *raises* things; in other words he has learned to a limited extent to give direction to the forces of nature. He has learned to produce, but he still lives chiefly on the raw materials he has coaxed from nature, not knowing how to make them up. He is learning to labor and to save. To be sure, he very early learns the art of making a few simple tools like bows and arrows and primitive stone implements; but with these few exceptions, it is worthy of note, that as man learns to subdue nature he begins not with dead nature,— not with inanimate things,— but with living or animate nature; he uses, not metals, but animals and plants, and

learns to increase their amount by artifice. Moreover, of these two classes of living things, he first subdues the higher form of life,—that which more nearly resembles his own,—and, as a general rule, not until long afterward does he learn to exercise any considerable control over plant life for his uses.

Changes that mark the Stage.—When hunting tribes cease to depend for food solely upon the killing or capture of animals, and turn to the art of taming and breeding them, such tribes are entering upon the second great era of economic progress, which we have called the pastoral stage. Even in the hunting stage there lay the beginnings of such progress, in the taming of dogs and horses for hunting; but when extensive pasturing of animals for food and clothing takes place, the pastoral stage has well begun. Marked features of the earlier stage still continue, however. Thus, while man now lives chiefly upon his flocks, he still leaves the flocks to live upon what they can *find*. So, while man no longer needs to wander in search of his own food, he must nevertheless do so for the food of his flocks. Cities are therefore still impossible. Moreover, though the land will now support many more inhabitants than before, much land is still needed for the necessary pasture, and tribes and families roaming broadly to search for desirable situations frequently come into sharp collision. According to the calculations of the celebrated geographer, Professor Ratzel, nomadic populations require, on an average, about a square mile for every two to five persons. Wars, therefore, continue, keeping down population, but with one important change: the victims of war for a long time continue to be generally slaughtered, the women and

children being more frequently spared than the men ; but men who have flocks to furnish them food in time cease to eat human flesh. Captives later come to be recognized as of use in serving their captors, and thus slavery succeeds cannibalism and slaughter. Slavery could not have become extensive in the earlier stage, because slaves without weapons would have been of little use when women did nearly all the drudgery, and, on the other hand, slaves with weapons would have been a constant menace to their masters.

Migrations.—Wanderings of whole peoples were very common, due in some cases to the exhaustion of old feeding-grounds, and in other cases to the natural increase in numbers when a tribe had been long established in one place. It was such overpopulation that brought about the warlike incursions of barbarian hosts into Europe from the heart of Asia, and the wanderings of the nations in the early centuries of the Christian era.

Little Land Ownership.—It follows from what we have already said that there was little ownership of land in the sense in which we now regard ownership. Tribes as a whole would lay claim to certain districts for a time, and would try to keep other tribes from pasturing there. But individuals of the tribe would own no land, or at most very little. The notion of land ownership develops only when the land itself becomes more useful, and when the fruits of its fertility can be more directly appropriated than could happen when land was used for pasturing.

Private Property.—Yet private property in other things than land had now become not uncommon. Even great accumulations of wealth took place, consisting of flocks, gold, silver, finely woven fabrics, and precious stones,—

in short, such things as very early appeal to the barbarian taste for showy ornament, and which may be transported from place to place with relative ease. We also find, even at this early time, great differences in the wealth of individuals, the rich and the poor being sharply contrasted with each other.

Little Commerce.—In spite of the growth of wealth among men, there was little exchange or commerce. The reason for this is not far to seek. In order to have commerce, not only must there be wealth, but the wealth must be diversified. There is little to be gained by exchanging ox for ox. Of course in the other classes of goods to which we have referred there was some little traffic, but trade in the modern sense of the word can hardly be said to have existed. The economy of each large family or household was in the main sufficient unto itself.

The Origin of Exchange.—Such trade as did exist was carried on by barter, or by the still earlier form of exchanging gifts. It is an interesting fact that barter, the earliest form of regular exchange, grew originally out of the practice of making presents. Among many primitive peoples to-day, barter is not recognized as an institution, but when one person presents a gift to another, he waits expectantly for a gift in return, and when he receives it, scans it closely to make sure that he has received an equivalent for his generosity.

III. THE AGRICULTURAL STAGE

General Characterization.—Man's next accomplishment, which carries him a distinct stage farther in his development, is of immense importance. Already knowing how to manage animals to advantage, he now learns to "man-

age" plants, and to raise them at will. Agriculture, as a means of support, is thus added to the keeping of flocks and to the chase. A greater variety of food is in this way made possible for man, who now ceases his wandering life. A much denser population is the result. Professor Ratzel's calculations indicate that the early agricultural populations were about six times as dense as the pastoral populations. With a denser population remaining permanently in fixed abodes, new relations spring up among men, new duties, new arts, and new possibilities of civilization. It is in these conditions that the political whole which we know as a nation has its beginning.

Land Ownership. — Along with growing density of population and increasing permanency of settlement goes a third result, — the private ownership of land. Successful cultivation of the soil requires detailed personal care and attention, and some sort of division of the land was hence seen to be necessary. The first parcelling out of the land, however, by no means gave rise to permanent private ownership. The tribe, or community, still owned the land, as is the case to-day with the Russian village community known as the Mir, and the division was recognized as but temporary and for purposes of convenience.

The Origin of a Laboring Class. — Perhaps the most important result of the change which produced the agricultural stage was the growth of slavery as an institution. As we have said, slavery had its beginnings in the preceding periods, but it is only in the agricultural stage that it becomes an important, almost a fundamental, economic institution. Tending the herds did not call for persistent labor, but the prose of tilling the soil is undisguised work, and primitive men were not fond of work, nor had they

been trained by long usage to submit to it as to an unpleasant habit. It is not strange, then, that they should have saved the lives of men conquered in battle with the design of putting upon them the task of tilling the soil. This seems to us perhaps a poor reason for being humane, but where humanity is the result, a poor reason is better than none. Free labor has become possible only because for century after century certain men labored not from choice but from necessity. As they became free, labor became free, and the habit of labor had become fixed in the race.

Commerce.—With every increase of wealth the tendency to trade also increases, but as yet the occasion for trade was slight, since men's wants and wealth were still everywhere much the same. Such trade as existed ministered chiefly to the love of luxury, and this long continued to be the case. It was probably in part from this cause that the ancient philosophers and the early fathers of the Christian Church displayed great hostility to commerce.

Laws and Customs reflecting Ideas.—There remains to be noted the change and enlargement in men's ideas, as reflected in their laws and customs. The Mosaic code, framed to govern a people in the pastoral and agricultural stages, furnishes us the best source of information regarding these new ideas. Even before this time there had been numerous customs regulating life, but in the Mosaic code we are struck by the great increase of duties and restrictions which were then recognized. With fixed residence had come the State, with its justice, its guidance, and its protection—its many *thou shalts* and *thou shalt nots*; and all this because men had now come to be permanent neighbors, and therefore had the utmost need of a

definite understanding to keep them from trespassing voluntarily and *involuntarily* on one another's liberty. If men are to live close together and accumulate property and enjoy it in peace, there must always be general agreement among the many, and vigorous compulsion for the few.

"Neighbor" and "Stranger." — It is worthy of notice, however, that for a long time duties and laws were chiefly recognized as being applicable at home. Beyond the boundaries of the tribe or nation they were scarcely held to be binding at all. Thus, for instance, in the early Germanic communities, when the scattered tribes were still small and separated by unoccupied land, the members of each tribe lived in relations of brotherhood, holding property in common and closely guarding all mutual rights. But when different tribes came together to trade on the neutral ground, or *Mark*, all kinds of sharp practice were deemed admissible. Things not to be thought of at home here passed unquestioned.

Duration of the Agricultural Stage. — The agricultural stage lasted for centuries among many peoples. In the development of the civilization of Western Europe, it did not evolve into a higher form until the tenth and eleventh centuries, when the great movement toward the building of cities began. Of course it has not been wholly displaced by subsequent stages of economic life, but only modified — unceasingly modified — in the progress of time. The marks of the earlier stage are clearly discernible even in our industrial life in America.

IV. THE HANDICRAFT STAGE

General Characterization. — We have said on an earlier page that real material civilization begins with making things; it is with the stages in which men make things that we have now to deal. Speaking very generally, we may say that men make things in either of two ways: by the hands *directly*, sometimes assisted by simple tools; or by the hands *indirectly*, through the mediation of machinery, generally propelled by other than man's power. As was natural, man in his progress came first to make things with his hands directly, learning later to quicken and improve his work by the use of machinery and the employment of power produced by animals or wind or steam. The very word "manufacture," which we use to represent the idea of *making things*, meant in earlier days *making things by hand*, as the Latin words from which the longer word is formed indicate. As the word has since had an extension of meaning, we may say that there are two kinds of manufacture: (1) hand manufacture, and (2) power manufacture. Hand manufacture is the foundation of the fourth stage.

It goes without saying that labor and capital — the fruit of past labor used for increasing the product of the labor of the day — now become more important than ever before. Man by his skill transforms raw materials: he learns to weave fabrics and to fashion things in wood and metal; to use inanimate, as well as animate, nature. The chief results of this will be more clearly seen as we discuss them under separate headings.

1. *Trades.* — Skill in doing comes from repeated doing. "The Jack of all trades is master of none." With the

coming of manufacture, therefore, self-interest leads men to specialize so far as the needs and circumstances of the time will permit them to do so with profit. Hence, in this stage, we find division of occupations, whereby some men become blacksmiths, some shoemakers, some weavers, etc. Many surnames, such as Smith, Baker, Joyner, Taylor, owe their origin to a time when such specialization was more remarked upon than at present.

2. *Commerce.*— We have more than once mentioned the fact that there can be little commerce so long as men are mostly engaged in the same kind of business. But when communities become larger; when their wants grow more various and their goods consequently of greater extent and diversity; when, finally, it becomes possible for men to specialize in their occupations, commerce becomes not so much a result as a necessary incident. When each man has his trade and makes articles of only one kind, he will neither want all the things that he makes, nor make all the things that he wants. He must make exchanges. And so, whenever manufacture develops, we find trade growing up with it as a necessity. We cannot say that manufacture results in commerce, nor that commerce results in manufacture. We must rather look upon the two as mutually causing each other, their joint cause lying in the growing culture and wants of mankind. This stage, on account of the appearance of commerce, is frequently designated as the trades and commerce stage, but it may also be designated more simply as the handicraft stage, inasmuch as it is dominated by handicrafts, and commerce has in this stage far less significance than in modern times.

With the growth of commerce, some men find it profitable to spend all their time in exchanging goods which

other men make, earning their compensation by saving the makers the greater time and trouble which direct exchanges would necessarily involve. Moreover, different countries also find an advantage in exchanging their respective products, and here again men of special training are needed to carry on the work of exchange. Such commerce as grows up during this stage between different countries or communities is much handicapped by the inadequate means of communication; but where goods can be carried by water, commerce, even in bulky commodities, takes on considerable proportions.

3. *Money.*—Of course, for such a general system of exchange, barter was entirely inadequate. Among primitive peoples barter is the only mode of effecting exchanges, and travellers among savage tribes tell amusing stories of the difficulties experienced in securing goods by such a system. We cannot here enter into a full discussion of the limitations of barter, but we may speak of one of the chief requisites for any exchange by barter,—the need of what one writer has called *coincidence of desire*. By this expression it is meant that before an exchange can take place by barter, the man who has a superfluity of one good and wants another must find a second person whose superfluity and want are reciprocal to his own. The rarity of such coincidence is itself sufficient to prevent barter from serving as an efficient method of exchange. In the course of time, as men bartered one with another, it was found that certain things were more generally acceptable than others, and that some one thing or some few things were most generally acceptable. These generally acceptable goods have varied in different stages of economic development and in different places. Among primitive peoples,

articles of adornment have usually held such a place. As people grew to learn that such articles were generally acceptable, they would use them more and more in their exchanges, and the frequency of use would in turn increase the recognized utility of possessing them. Without going further with our explanation, we may say that, *spontaneously and in large part by unconscious processes, there has always grown up among every people some one generally accepted and recognized medium of exchange or some few things that have been so recognized.* As this medium grew in acceptability and cognizability, it took on more and more the character of what we know as money. It was during the handicraft or trades and commerce stage that gold and silver, already much used for this purpose, came to have that universal recognition for their desirability in exchanges that made them money.

4. *Cities.* — Among those employed in agricultural pursuits, there is a tendency to form village communities, but in the agricultural stage such communities cannot become populous, because agriculture requires a scattered population. Manufacture, on the other hand, has an opposite tendency. If men are to live by their trades and by exchanging with one another, it is important that they be near one another. Thus cities, situated conveniently for commerce on the coast or on great rivers, develop whenever men learn to manufacture.

5. *The Gild System.* — New forces coming into society do not take care of themselves. So the trades had to organize in order to reduce their business to some kind of order. Each trade had its gild, which specified in detail how the business should be carried on, how many should be admitted to it, and how the trade should be

learned. Where, as was usual, the gilds controlled the government of the cities, these rules were early sanctioned by law.

6. *Political Freedom.*—Throughout most of Europe the agricultural stage had culminated in the feudal system. Under that system the feudal lord occupied a commanding position, very like that held by a patriarch in an earlier pastoral state, and owned the land occupied by the tribe or people. The tillers of the soil had become serfs, who, though they could not be sold away from the land, were obliged to stay on the lord's domain and work for him for such reward as he chose to give them, or such as custom and public opinion, powerfully backed up by the Church, had established. Slavery thus gave way before serfdom. The manufacturing cities very naturally became rivals of these great feudal estates. The lords, feeling their power threatened, bitterly opposed the cities. And so there were wars and alliances and treaties, until finally the cities conquered, as they were bound to do in the end. These cities were free cities, and serfs who fled to them were accepted and made free. Thus feudalism began to break down, and in the gradual disappearance of slavery and serfdom, man's progress in the art of getting a living resulted in another great step toward liberty and humanity.

SUMMARY

1. Uncivilized man gets his living by hunting or fishing, or by both.
2. Economic activity in the earliest stage is largely isolated.
3. Hunting tribes differ in character from fishing tribes, owing to the difference in the conditions of their life.
4. The domestication of animals, leading to the pastoral stage, assures subsistence, introduces slavery, and increases wealth.

5. The pastoral stage has little landownership or commerce, and is marked by frequent tribal migrations.
6. In the agricultural stage, man adds the "management" of plant life to his earlier management of animal life, thus making his existence more secure and population more dense.
7. Cultivation of the soil fixes residence, extends law and custom, and develops tribal ownership of land and a distinct laboring class.
8. Economic civilization, which begins with the *making* of things, appears in the handicraft stage, called also the trades and commerce stage.
9. In the handicraft stage, money is regularly used, trades are developed and organized in guilds, and cities, rising from the new commerce, become free and break down the feudal system.

QUESTIONS

1. What is the economic mark of savagery? How do hunting and fishing tribes differ? Why?
2. What is the economic mark of semi-civilization? What stages have this as their special character?
3. What other economic changes from the earlier stage are found in the pastoral stage?
4. What is the fundamental difference between the agricultural stage and the pastoral? What economic results flow from this difference?
5. What is the economic mark of civilization? What stages have this special character?
6. What is the relation between trades and commerce?
7. What great economic institutions grew out of trades and commerce?

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CHAPTER III

THE INDUSTRIAL STAGE IN ENGLAND

WE come now to the last of the stages in man's economic development. Inasmuch as this last stage is the one in which we are living, it will be well to give to it a more detailed study than has been given to the preceding stages. After a general description of the characteristic differences between the industrial stage and the stage which preceded it, we shall pass on to study the history of the great movement by which the industrial stage was ushered in. As it was in England that the movement began, and as it is in the United States that the movement has perhaps proceeded to the greatest extreme, we shall consider the history of the movement with reference to these two countries.

A closer study of the period than we shall be able to devote to it would disclose the fact that the industrial stage has up to the present shown three distinct phases. The distinguishing characteristic of the earliest phase—say from 1760 to 1830—was development of machine industry and the application to it of steam power. From about 1830 to about 1870 the distinguishing characteristic of industry was the development of steam-power transportation. From the latter date to the present, the most striking fact in industry has been the concentration and integration of capital in the fields of manufacture

and transportation. To study these minor periods in detail would require greater space than can be given to the subject in a book of this sort; but in our study of conditions in the United States at various points in the text we shall have occasion to throw further light upon them.

I. THE INDUSTRIAL STAGE

General Characterization. — As we have said, man may manufacture by hand or by power. It was a great step forward when man learned to manufacture at all; it was a transformation of society when man learned to manufacture by power. Mere human muscle is an insignificant force as compared with the external forces of nature, and man's greatest accomplishments when he depends upon his own unaided efforts are relatively unimportant. But man has more brains than any other creature, and progresses by their use.

It is hardly necessary to state to the student that the industrial stage began with the inventions and discoveries which resulted in the steam-engine. The date usually associated with this important change is 1769. Here, as in the preceding chapter, it will conduce to clearness if we analyze the situation and show the characteristic contrasts between the industrial stage and the former stage of economic development.

1. *Relation between Classes.* — Under the old system of hand manufacture, each master in a trade worked by himself or with a few others, apprentices or journeymen, who in time would normally become masters themselves. Hence we may say that men in the full possession of their trade worked on their own account and *owned what they made as well as the means of manufacture*. When prices

rose, the benefit went to them. Strictly speaking, there were no class divisions in manufacture, an apprentice or a journeyman being simply a master "in the making," living on terms of intimacy in the master's family, and in many cases marrying the daughter of the master and later succeeding to the business.

Rise of Factories. — But it is manifestly impossible for every workman to own an engine and elaborate manufacturing machinery. The result of the application of steam to manufacturing, therefore, was that a few men, more enterprising or wealthier than the rest, made the experiment, bought high-priced machinery, employed workmen, and quickly distanced the conservative ones who resisted the change. Under these conditions, as we can now see, the *factory system* was bound to grow and to supplant the old system of *house industry*. Those who resisted had to go to the wall. They did not enjoy the process nor were they patient under its operation; but at length, their fortunes wasted, their business ruined, their hope of successful resistance gone, they yielded and sullenly sought places as workmen in the new factories.

Before this great industrial change, employer and employed were not, as we have said, sharply or permanently divided by class distinctions. Living and working together, apprentice and master had that mutual respect, which came from the remembrance of his own apprenticeship on the part of the master, and the assurance of a future position of independence in the breast of the apprentice. Now we have two distinct industrial classes, with interests that seem irreconcilable, and between them is fixed a great gulf which in an old society comparatively few men can hope to cross.

2. *The Wages System.*—Formerly the workman had what he made and sold it for what he could get. This was natural under a system of divided labor in which each man made one article and that a whole article. But in the more efficient processes of production that obtain today, there is necessary a much greater division of labor, or rather combination of labor. Now, it requires many men working together to make a single article efficiently. But when a group of men have made a case of shoes, of which one has cut out the soles, another has made the heels, etc., who can say how many shoes the individual workman has made? Then, too, the employer has furnished materials and machinery and has assumed the risk of loss. He must be paid. How many shoes shall be his portion of the whole? Some way out of the trouble must be found. As a matter of fact the way adopted was the simplest one and perhaps the best. The employer takes all the shoes, and gives the workmen for their labor, not the actual product of their labor, but a stipulated wage which is represented to be an equivalent. And thus has grown up the modern "wages system" of employing labor.

3. *Competition.*—Under the old gild system of manufacturing for purely local markets, prices, as well as many other elements of industry, were regulated by custom or law. The man trying to undersell his neighbor would have been an object of public contempt and hatred. Men sometimes entered into rivalry or competition to see who could make goods of the best quality, but even here custom and law sometimes entered to reduce all to a dead level by determining what the quality of the commodity should be.

But with the growth of great markets in the industrial

stage all this was changed. Factories now competed not for the trade of a single city or county, but for that of a whole country or of the world. The producers were no longer neighbors living in close and friendly intercourse, but great hostile businesses often situated in different parts of the country. The earlier stage had been prevailingly a period of "town economy"; the new stage was a period of "national economy," which in our own time has developed into something very like a "world economy." Under such conditions, competition once begun must go on getting ever fiercer and fiercer. It was not a competition in well-doing, but in money-making.

The struggle had its good results. It was what men needed to stimulate their energy and enterprise. Invention followed invention; business rapidly centred in places where it could be carried on at the greatest advantage; labor processes were divided and subdivided as the increase of machinery and the growth of markets rendered division profitable, and by these and other means the cost of production was constantly lowered.

Thinkers of the time not unnaturally were profoundly impressed by the rapid increase of wealth due to competition,—or rather to freedom of industry,—as well as by the irksomeness of the old gild restrictions, to which appeals were being made by those who wished to curb the new movement. They overlooked the evils of unrestricted freedom, and in consideration of its benefits concluded that the State should not try to guide industry, as it had so long been doing, but that industry needed only to be left alone to achieve its grandest results. It will be necessary later to note some of the results of the attempt of the government to follow this principle.

4. *Banking and Credit.*—All great movements are complex, the various parts being mutually cause and effect, one of another. The preceding stage had developed money; the industrial stage has developed credit. Credit has been in part the result, as it has been in part a cause, of the other great changes which characterize the age. Money is still used as the most common medium in retail trade and in small transactions generally, but in large transactions it has been displaced in great measure by the various instruments of credit, such as checks, drafts, and bills of exchange. Moreover, to secure a proper organization of credit, it has been necessary for society to develop the system of banking as we know it to-day. Thus one great improvement forms others and is in turn formed by them. In 1782 there was but one bank in the United States; in September, 1902, the national banks alone numbered 4601, while if we add to this number the state banks, private banks, and trust companies which perform banking functions, the total would rise to over 12,000.

5. *Transportation.*—Before the beginning of the industrial stage, the problem of moving things was far less important than it has since become. Not much could be moved long distances by land while only packhorses and wagons were known. Often, too, the roads were such as prevented the best results even from such a mode of locomotion. Transportation by land being so difficult, commerce depended then, as always before, chiefly upon water. Sailing vessels, though slow, could carry even bulky commodities between places connected by water, and large cities were therefore always seaports. We have become more independent of waterways furnished by nature or by art. Important cities can now grow up miles away from

navigable rivers or the seacoast, though the importance of water communication even to-day is attested by the slight proportion of cities that are so situated. In all this we see that civilization is marked by man's increasing domination of nature.

6. *Moral and Legal Restraints.* — Always in past stages of economic development, we have seen a sharp distinction drawn between neighbors and strangers. The family and neighbors have formed a constantly widening circle, and have always been protected by detailed law and custom; strangers on the other hand were exposed to whatever treatment might be considered advantageous. Indeed, the word "stranger" in many languages even had the added meaning of enemy. It is characteristic of the industrial stage that the distinction between neighbor and stranger is no longer a clearly defined one. It may be asked, Have all men, then, become brothers, or have they all become strangers and enemies? Few will claim that men in their *business dealings* are brotherly. Yet if we look at the whole of the industrial stage, we shall have reasons for believing that the change which has been taking place has been to make neighbors of those who were strangers and enemies. The great and sudden widening of the circle of neighbors was naturally accompanied by a weakening of the feeling of neighborliness. But in our own time more than ever before there has been a conscious effort to strengthen this feeling of neighborliness or brotherhood, and to widen the circle even beyond national lines. Humanity, on the whole, has not been lessening but growing.

II. THE INDUSTRIAL REVOLUTION IN ENGLAND

Economic Conditions in 1760. — It was in England that the change from the handicraft stage to the industrial stage first began and was most rapidly accomplished. The change is generally called in England the Industrial Revolution, and the name is appropriate. A change which takes place so gradually that life adjusts itself to the new conditions without great loss or suffering, — a change like that which occurs in the plant that is always growing, yet seems to be at a standstill, — such a change we call a development or *evolution*. But a change which comes so rapidly that life cannot promptly adjust itself to the new conditions, a change that breaks down the old order with much confusion and suffering, — this we call a *revolution*.

To understand the English Industrial Revolution aright, we must first go back to study the condition of things just before it began.

1. *Agriculture.* — In 1760 immense tracts of English land were still held as "common" land. Seven million acres of such land were made private property between 1760 and 1848. Upon this common land laborers built their cottages, cultivating little patches of it for themselves, and pasturing upon the rest of it the few geese or sheep that they were able to keep. The advantage was that the laborers were somewhat independent, paying no rent, and having some slight means of support besides their wages. The great disadvantage was that most of the land was so poorly utilized that it was well called "waste" land. What was every one's business was in that case, as generally, no one's business. The marshes were

undrained, and what little cultivation was practised was primitive and poor, and therefore wasteful in the extreme.

2. *Manufactures.* — But it was in the department of manufactures that the greatest change was to occur. The system of hand manufactures was still general. When Adam Smith, in his *Wealth of Nations*, published in 1776, wrote, "A man grows rich by employing a multitude of manufacturers," he was using the word manufacturers in its then usual sense, to denote artisans or mechanics. The principal manufactures were woollen goods, which England exported in 1770 to the value of about £4,000,000, that being nearly a third of her total export trade. The methods of manufacture were primitive. In the textile industry, for instance, the "manufacturer" had his home, his cows, his horse, and his poultry; he bought his wool, his wife spun it into yarn, and together they wove it and sold it at the "fair," enjoying all the proceeds. As the spinning on the old spinning-wheel was done one thread at a time, it followed that a weaver with a hand-loom could work up the yarn more rapidly than it could be spun. Even before 1760, however, a change had already begun. Cities began to attract the hand-workers. The inevitable tendency to divide the processes of manufacture showed itself. The workers found it difficult to attend to the buying of the wool, the spinning, the weaving, and the selling of the finished goods. So the processes were divided, and middlemen appeared who bought yarn from the spinners and sold it to the weavers. Later they ceased to sell the yarn, but furnished it to the weavers on contract, keeping a claim upon the cloth, and paying a stipulated sum for the weaving. Thus the old "manufacturer" became a

workman, a wage-earner, and in a measure dependent upon the capitalist who furnished the stock. Many of the germs of the factory system therefore existed as early as 1760, though as yet the work was generally done by hand power with very simple implements.

Next in importance to the woollen industry was that of iron; but England in 1737 imported perhaps twenty thousand tons of iron, or more than she herself produced. After 1740 the iron trade had begun to fall off because supplies of charcoal for the charcoal smelting of the time were almost exhausted. Other forms of manufacture, such as those of silk, linen, and cotton, had hardly begun.

3. *Transportation.* — Such goods as were manufactured could be moved only with great difficulty and at great expense. Transportation facilities were very backward. One traveller of the time, who speaks of the highways as "most execrably vile," tells us that he found ruts four feet deep, and that he "saw three carts break down in a mile of road." Such being the condition of the roads, packhorses were still the common means of transporting goods to and from market. The only improvement before 1760 consisted in the building of a few canals.

4. *Economic Legislation.* — Of all the conditions that were characteristic of the time, that of the economic legislation of the period seems most strange to the modern reader. The mediæval notion of government was still nominally in force. In general, this notion was that detailed special legislation was required for many cases in which we of to-day regard general laws as preferable. Thus the State passed many laws to regulate religion, agriculture, manufactures, and commerce. Some of these laws require our special attention at this point. We have

already remarked upon the fact that men of the earlier days did not believe in competition. They dreaded the mischief a stranger might work, coming into a town and carrying on trade in an irregular fashion. So they passed in England a law known as the *Statute of Settlements*, which prescribed that no man could carry on a trade unless he was a citizen of the city and a member of the trade gild there. It also provided that a workman coming into town must, upon the demand of any citizen made within forty days of his coming, give evidence or surety guaranteeing the town for one year against his becoming a charge upon the taxes for the relief of the poor. Since few could furnish such a guarantee, the law was a very serious obstacle to freedom of movement. By another law it was prescribed that one could become a member of a trade gild only after seven years of apprenticeship, and only in a specially prescribed manner. Moreover, there were other regulations limiting the number of apprentices. The purpose of such regulations was to protect the various trades from overcrowding and from irregular methods. It must be remembered that at the time when such regulations grew up competition in the modern sense was an impossibility, and nothing but such customary or legal restrictions could avail to guard the true interests of the individual and society.

Wages. — Perhaps the most striking of all the economic legislation of the time was the law which left to Justices of the Peace the work of fixing the wages of workmen. In explanation of the law it was often held that workmen would be oppressed if left to the mercy of employers; but the real purpose of the law seems rather to have been to protect the employer against high wages,

and the spirit of the administration of the law seems to have conformed to that purpose. Inasmuch as the workmen were thus "protected" by law in the matter of their wages, combinations among them were held unnecessary and dangerous, and were therefore strictly forbidden.

5. *The Condition of Thought in 1760.* — We should fail to understand the Industrial Revolution were we to confine our attention to the economic life. In 1760 there had recently begun a tremendous revolt against the whole system of legislation and government that we have described. But it would be a mistake to suppose that this revolt, which eventually carried everything before it, showed itself only in the field of industry. Indeed, the restrictions which aroused the greatest opposition were those upon conscience and religious worship. Next to religious liberty political liberty was the desire of all Englishmen. While restrictions upon trade were accepted without vigorous protest, the passion for personal liberty worked itself up to a fanaticism.

Under the influence of this spirit of protest, Adam Smith wrote, and in 1776 published, his *Wealth of Nations*, the most influential book on economics that has ever been written. Men — so runs his argument — are by nature free and equal. Inequalities are of man's making, and are to be avoided. Leave men alone and equality will reassert itself. What men need in their business is not protection but liberty. Under a system of free competition each man will seek his own interest, and, in seeking his own interest, will promote, as a rule, the best interests of society as well. If the result is not the best that is ideally conceivable, it is at least the best that is practically possible, and is certainly better, thought

Smith, than can result from any interference of government.

Such was the temper of the age; so universal was the impatience with restraint, even the most wholesome; and so mischievous and shackling was much of the existing economic legislation, that the *Wealth of Nations* was soon elevated to the rank of an economic gospel, and, followed as it was by other great works of similar character, it inspired the economic policy of the greater part of the nineteenth century. We shall note later the results of the adoption of that policy.

The Changes and their Result. — 1. *Changes in Agriculture.* — During the eighteenth century there were great changes in English agriculture. High prices made possible more intensive farming, and with this greater application of capital, radical improvements in farming methods were developed. As a result of these changes, large farms supplanted the small ones. Also, the social and political prestige attaching to landownership tended to concentrate the ownership of farms into fewer hands. Thus these and other forces, which we need not stop to explain, rapidly dispossessed and drove away from the country districts multitudes of poor people whose only chance for a living now lay in moving to the growing towns and adding themselves to the increasing numbers of the "factory" population.

2. *Changes in Manufacture.* — In 1769, while Adam Smith was writing the book which was to exert so profound an influence upon the economic thought of the future, a friend of his, James Watt by name, was preparing the way for a revolution of the world's industry by the invention of the steam-engine. When the "society

of hammermen" of Glasgow refused to let Watt work at his trade there because he was not a member of their gild, permission was secured for him to set up his shop on the University grounds, outside the city's jurisdiction, and thus two of the greatest forces that created the Industrial Revolution were born close together in the shelter of a school of learning.

In the same year, too, there began a series of inventions which, during the next fifty years, completely revolutionized the textile industry, and gave cotton manufacture, instead of the manufacture of woollens, the first place in English industry. The invention of the spinning-jenny made possible a vast increase in the production of yarn for weaving, and since better goods could now be produced at a lower price than before, the demand for the goods was much increased, and weavers, still using the old hand-loom, were kept busy at higher wages than they had before received. But within a few years the power-loom for weaving had been invented and improved, and many of the weavers found themselves out of employment. As it was possible for a single person to tend four power-looms, three out of four of the workmen were thrown out of a job until the increased demand for the finished goods should increase the number of looms. Moreover, as weaving by the power-looms required deftness rather than strength, women and children came to be employed instead of men, because they could be hired at lower wages. Just at the close of the century the cotton industry was still further stimulated by Eli Whitney's invention of the cotton gin for mechanically clearing cotton of its seeds.

At the same time steam was rapidly taking the place

of water power in manufacturing. The greatest change was wrought in the cotton-manufacturing industry, which since the introduction of steam has held one of the foremost places in English economic life; but similar results attended changes in the manufacture of woollen, linen, and silk goods.

By the invention of the steam-engine, the output of English coal mines was vastly increased, since shafts could now be sunk deeper and the mines kept free from water. With increased supplies of coal, iron could be worked by the blast furnace, instead of by the old process of charcoal smelting, and the iron trade was therefore quickly revolutionized. The importance of this change may be understood when we remember that under modern conditions of industry those nations that surpass in the production and manufacture of iron and steel for their machinery hold the leadership of the world's trade.

3. *Changes in Transportation.*—The great change in methods of farming and manufacturing naturally gave a new stimulus to the development of improved transportation facilities. The public highways were greatly improved under the direction of such engineers as Telford and Macadam, from whom our best methods of road construction have taken their names. New and longer canals were dug, and the movement would have gone much farther had it not been checked after 1825 by the development of the system of steam railways. Even before 1825, when the first railway was opened, steam had for some years been successfully applied to water transportation. Within a half-century, England became one vast network of railways, and it became possible to transport the bulkiest commodities from one end of the kingdom to

the other more cheaply than they had been moved from one county to another with the old means of transport. Wheat can now be carried from our Western grain fields and laid down in the English markets more cheaply than it could be moved an average distance of from thirty to forty miles in the England of 1760.

4. *Changes in Economic Legislation.* — With the passing of the old industrial methods came the demand for freedom from the old and vexatious restrictions. Whatever might have been said in justification of such restrictions in earlier days, the time for them had now passed, and they were destined to go.

The old laws were, of course, not repealed in a body. Such a thing never happens in England, and it is a rare occurrence in any country. Some laws were repealed, and some simply died. Thus, the law requiring seven years' apprenticeship before one could enter certain trades died during the latter part of the eighteenth century. Years afterward, at the beginning of the nineteenth century, in the labor troubles of the time, some workmen in desperation turned back to the old law and prosecuted employers for violating it. The result was that the law was at first suspended and later repealed as being plainly ill adapted to the new conditions of industry. Thus, little by little, the old laws were repealed or forgotten, and men were left free to bargain and manufacture as they pleased.

Labor Laws. — Of the many laws regulating labor, it must be remembered that they were designed not so much to help the workmen as to check their growing power and aspirations. When Adam Smith declaims against labor laws, he has in mind laws aimed against labor, not laws

like those of modern times which have been designed to benefit the laborer. Indeed, he says in one place that if any law chanced to be beneficial to labor, it was sure to be a just law. A striking instance of the unfairness of the old labor laws is seen in the case of the statutes against combinations. Although from the first capitalists were allowed to combine, workmen were forbidden to do so under severe penalties. Even after the laws bearing on apprenticeship, regulation of wages, and inspection of goods had been repealed or had lapsed, this law against workmen's combinations continued operative, and under it men who attempted to form labor-unions were at times severely punished. But eventually this law also was repealed.

Results of the Changes.—1. *Industrial Disturbance.* The results of the great changes that constituted the Industrial Revolution have been startling. The area of the markets for various commodities was marvellously widened, and distance from the consumer no longer weighed heavily in the mind of the manufacturer in determining the location of his plant. The balance of convenience rather inclined toward concentrating industries in those places where they could be carried on to special advantage. Thus, there was first a concentration of industries near favorable water power, and later, in some cases, near facilities for the production of steam power. This change took place usually not by the removal of old plants and industries to new localities, but by the growth in favorable centres of such powerful rivals that the scattered factories were gradually forced to go out of business. Thus, not only were country artisans forced out of employment, but even certain towns were

sacrificed to others that enjoyed a more favorable situation.

2. *Growth of Cities.* — Another important result of the changes in the methods of industry, and particularly of the changes in the methods of transportation, was the growth of cities. While concentration of population has had many beneficent results, and promises still others in the future, the evils connected with such aggregations of people have formed one of the most serious problems that our generation has to face.

3. *Fluctuations in Trade.* — One cause of the comparative simplicity of the old and slow-going system of manufacture and trade was its great regularity. One year was much like another. Producers could calculate the amount of their product that would be required, and could calculate also what would be the return to their labor. With the growth of national and international markets came increasing complexity of wants and increasing fickleness of fashion. It was no longer easy to know what things would be wanted or in what quantities goods would be taken by consumers when produced. A period of over-cautious production would lead to unduly high prices. New capital would be tempted by the profits, and the old manufacturers would forget their caution. Then would come a glut, prices would fall disastrously, factories would be closed, and workmen would be thrown out of employment. But depriving a large section of the consuming public of its purchasing power — its wages — is not an ideal method of reviving industry. Thus times of plenty for the workmen would be succeeded by times of great want, with all the evil results upon character that uncertainty of life and work can produce.

Reaction against the Passive Policy of Government.—We have already explained that accompanying the change in industrial methods went a radical change in opinion as to the proper attitude of the State toward human affairs, including industrial affairs. This change was in part due to a feeling that men had really become so intelligent and reasonable and just that they would know and respect one another's rights. But the chief reason for the change was the general acceptance of Adam Smith's central doctrine that self-interest will regulate men's actions for the general good more nearly and more surely than can any statutes framed by man. We have now to study in detail some of the points in which this theory of governmental passivity has broken down under the test of experience, and some of the changes that men have found themselves compelled to make in consequence.

1. *Government Inspection of Goods.*—In repealing the old laws for the inspection of wares, it was claimed that under the free play of self-interest in competition, cheating would not pay and would therefore cure itself. Needless to say, these hopes were never realized. Men might perhaps be safely left to pursue their own interest in buying goods if they knew enough to do so, but they do not. Indeed, it was far easier for one to assure himself of the quality of his purchases in the old days when the goods were of less variety, were more simple in their character, and were made by craftsmen who were not remote from the purchaser. But who in our day can tell the quality of baking-powder, of ground spices, or of a thousand and one things that are subject to adulteration? How many can distinguish butter from oleomargarine? How many can detect fever germs in water or trichinæ in

pork? For all these and many other things the ordinary buyer's knowledge is worthless: an expert must be employed. Such has been the experience of the English people, and the law now provides for the inspection by government experts of meat and fish, groceries, drugs, butter, and other articles of food. Gold plate and silver plate, gun barrels, steam boilers, drains and sewers, gas, weights and measures,—all these are tested on the same general principle that the government through experts must guard the people from those serious dangers against which they cannot or habitually do not protect themselves. In reality, men do of course in this case protect themselves, but they do so through their government, which represents their coöperative effort, rather than each man for himself. For every man to attempt to do everything directly for himself would be to return to barbarism. Division of labor and coöperation are causes and signs of advancing civilization.

2. *Governmental Protection of Labor.*—Nowhere was freedom more absolutely demanded at the time of the Industrial Revolution than for labor, and nowhere was it more needed. The old restrictions were galling and burdensome alike to masters and men. But what of the freedom that took their place? When machinery was introduced, it became possible to employ women and children in work that had formerly required the labor of men. But modern machinery is as destructive of life as a cannon is, if human life gets in its way; and the destruction of life and limb in the early days of machinery was appalling. Here again it had been ingeniously argued that self-interest would lead employers to protect their employees from injury of every kind. The basis of the

argument was of course the assumption that such protection would be to the benefit of the employers. But this assumption is not valid.

So scandalous was the neglect of the early manufacturers that a reaction set in against the old license, and laws were passed requiring under heavy penalties what the simplest dictates of humanity ought to have secured and would have secured if men had been fit to be left to unregulated competition. The employment of children four and five years of age, the bad ventilation of factories, working over hours, neglect of education of children, and many other evils, called for a like interference. Indeed, it would be hard to mention a point in which employers could neglect the interests of their employees and yet did not do so.

The result of a public recognition of these evils was a series of Acts of Parliament, known as the Factory Acts, beginning with that of 1802 and running down to the present time. Laws now in force provide, among other things, for : (1) the fencing in of all dangerous machinery ; (2) ventilation and other sanitary conditions in factories ; (3) a working day for women and children for most industries of not over ten hours ; (4) a Saturday half-holiday ; (5) prohibition of employment of any persons under eleven years of age,—or of persons under sixteen, unless they present a certificate of fitness ; (6) schooling for children half of each day or full hours on alternate days ; (7) the keeping of a register by employers in which they must enter all to whom they give out work, thus giving opportunity to inspectors to inspect the places where such work is done; (8) government inspectors to see to the enforcement of the law. This

last provision has been found by experience to be one without which the rest of the legislation might as well not have been passed. In contrast with the provision which limits the work of women and children to *not more* than ten hours per day, place the old law of apprenticeship by which a boy must work *at least* from five in the morning till between seven and eight at night, with time off for meals. The change is significant as showing that whereas the old laws were framed in the interest of employers, modern ones have been designed in the interest of employees, or, to consider it more broadly, in the permanent interest of the people as a whole.

3. *Trade-unions and the Government.*—As the wage system developed during the Industrial Revolution there was a natural tendency for the wage-earners to group themselves by trades into unions for the protection of their interests. So jealous were the ruling classes, and so fearful lest the lower classes, who greatly outnumbered them, might by combining abate their power, that they had passed laws against such combinations at intervals ever since 1360. Hence, when the wage-earners found the need of union rapidly increasing, they were driven to secret organization for lack of the open methods which were denied them. In 1800 Parliament, finding that in spite of the law unions were steadily gaining in strength and numbers, passed a comprehensive law to suppress them, even declaring illegal "all agreements between journeymen and workmen for obtaining advances of wages, reduction of hours of labor, or any other changes in the conditions of work."

So odious did this law become that employers sometimes voluntarily pledged themselves not to have recourse

to it. In 1824, after prolonged agitation, Parliament confessed the law a mistake, and at the same time repealed earlier laws relating to combinations of workmen. Thus freed from outlawry, trade-unions grew at an astounding rate. But they were still subject to legal persecution of one sort and another. Especially did they suffer at the hands of the courts from adverse decisions, which declared their united efforts to advance their interests conspiracies "in restraint of trade." Finally, in 1875, a law was passed which expressly declared that the purposes and actions of trade-unions were not to be held unlawful on the ground that they were in restraint of trade, and in the second place, that acts which are lawful when done by one person shall be held lawful even when done by two or more conjointly, if such acts are in furtherance of an object sought through a trade dispute.

Conclusion. — We have pointed out a few of the many ways in which the new theory failed to justify itself when applied to the new economic power. The new power was that which created the revolution. The new theory was that which asserted the universal efficacy and beneficence of unrestrained industrial freedom, or unregulated competition. The theory and the power were alike strange to men. The new theory promised an immense increase in the product of national industry and a just distribution of the product among those who contributed to its making. An immense increase of product there was, though this was due to invention as well as to competition. But the theory failed to fulfil its promise as to the distribution of the new wealth. Not until benevolence was formulated and enforced by legislation was the situation in this respect endurable. The reaction against the theory was

not sudden, nor was it a conscious and definite revolt at all. The essentially practical and concrete habit of mind of the English people has become proverbial. They had been driven into the temporary acceptance of unregulated competition by the great changes in industry. When weakness in the action of that principle became manifest, they simply changed its action little by little by applying the regulative power of government. And when the nineteenth century had passed, it was found that the good in the competitive principle had been retained, while the principle in its universal form had ceased to command assent. When, therefore, we hear the principle of a "fair field and no favor" and "no state intervention" advocated by a man strong in the consciousness of personal advantages,—for such he is likely to be,—we may know that he is a full century behind his time, and that he has not read or has not profited by one of the most impressive chapters of human history. For the English nation to-day, after a fair trial of free competition without government interference, has undeniably returned to the principle of governmental activity which she sought to abandon. Bitter experience has taught her that it is among the true functions of the State to protect its citizens and to further their material and social well-being by every law and every activity which can contribute to that end.

SUMMARY

1. In the industrial stage men make things by machinery. The result is separation of classes, keen competition, a development of money and credit, and improved facilities for transportation.
2. In 1760 agriculture was still primitive, manufacture was in the handicraft stage, and there was much restrictive legislation.
3. After 1760 there was a revolution in the system of landholding

and landworking, transportation was revolutionized, and the factory system was developed.

4. The Industrial Revolution produced great social confusion, immoral competition, and violent fluctuations in trade.
5. A reaction against the old absence of restraint has made itself increasingly manifest in the years that have followed.

QUESTIONS

1. Characterize the three phases of the industrial stage.
2. How was production carried on before 1760? What was the nature of the markets?
3. What changes in social organization resulted from the Industrial Revolution?
4. Describe the struggle of labor-unions for existence and for legal recognition.
5. Who was Adam Smith? What was his significance as a voice of the time?
6. Discuss the question of the passive policy of government.

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CHAPTER IV

THE INDUSTRIAL STAGE IN THE UNITED STATES

I. THE INDUSTRIAL REVOLUTION IN THE UNITED STATES AND ENGLAND CONTRASTED

THE story of the Industrial Revolution and of the industrial stage in England is in great part the story of the revolution and the stage in all countries that have gone through it. In studying the economic history of the United States for the same period, it is therefore unnecessary that we should enter again into all the details that go to make up the great movement. But as no two countries have the same racial and physical peculiarities, so no two countries are affected in precisely the same way by great industrial changes. The economic history of the United States is, in part, the history of the attempt to apply the principles of free competition and a minimum of State interference to a new country instead of to an old one, as was the case with the English experiment. This difference is so great as to have modified the result materially, and it will therefore be profitable to study more particularly these differences.

The principle of non-intervention was adopted in our own country even more fully than in England, where the State has never ceased to exercise a close supervision and control over religion. In some respects the results in the

two countries have been parallel, in others, not. At first sight it may seem that American experience does not so sharply condemn the passive policy of government as does that of England, and the question may be asked whether our conclusion from the history of English industrialism was after all correct? Which of the two countries has given the principle of unregulated competition the fairer test?

It will be remembered that the suffering which attended the Industrial Revolution in England was of two kinds and from two different sources. One was due to the rapidity and the magnitude of the industrial change, and was inherent in the *change*; the other was due, not to the change, but to the manner in which the change was effected, and to the *system* under which the new industry was carried on. In other words, one was due to change, the other to unregulated competition. It is necessary to keep these two causes distinct, if we are to reach a just conclusion regarding the influence of unrestrained competition upon industrial life.

1. *Comparative Difficulty of Transition.*—We have already seen how difficult was the transition from the old to the new order in England. In our own country, the difficulty was slight, or perhaps we might more properly say that there was no transition, since, when the Industrial Revolution began, there was in America almost no manufacturing at all. Our industries were scarcely started when the spinning-jenny, the power-loom, and the steam-engine were introduced, and so almost from the beginning the factory system seemed the natural one. Such change as there was from hand industries to power manufacture produced results similar to those witnessed in England; but

the change with us was so insignificant in extent as scarcely to attract public attention. Moreover, artisans who were thrown out of work had greater opportunities, and, on account of the less fixed conditions of life, were more ready, to get new employment in the growing industries of the time. Thus, the change which in England was a *revolution* was in America an *evolution*, a process of construction with little destruction, since there was little to destroy.

2. *Comparative Difficulty in Operation of Competition.* — Under the system of unrestrained competition, the English workmen played a continually losing game ; such was not the case with their American cousins. Just as the littleness of our industries at the beginning of the Industrial Revolution mitigated the sufferings from the *change*, so the greatness of our territory mitigated the sufferings from the *system* of competition. The average American does not adequately realize the difference between Americans and Europeans in their readiness to move about from place to place. A comparison of census figures of our country with those of European countries shows that with them the proportion of persons living in town or county other than that of their birth is slight, while with us it is very great. Thus the census of 1880 disclosed the fact that only one-half of the native-born inhabitants of the country were living in the county of their birth, and this despite the fact that a large proportion of the total population is made up of children, who, of course, would generally be living in the county of birth. Similarly, the census of 1900 shows that nearly thirty-two per cent of the total population of the country are living in states other than those of their birth, a proportion

which has remained nearly constant for several decades. Throughout our history, up to recent years, the American workman has always been able to secure cheap or even free land where he could earn an independent living. Under these two conditions of ready migration and easy access to independent proprietorship, it was impossible for the downward pressure of competition to work out such results in manufacturing industry as were inherent in the system itself, and such as must show themselves when no counteracting influence is opposed. Indeed, we may say that competition in America was regulated from the beginning, not by legislation, but by those great industrial forces and opportunities which we have just mentioned.

But this influence cannot be exerted forever. Our territorial resources, great as they are, have their limits, and it is usually agreed that the American "frontier" has now disappeared. Indeed, it is probable that we have already reached the parting of the ways, and that henceforth our reliance must be placed upon some other agency than the free bounty of nature. As free land has become less and less abundant, the wage-earners of the East have had forced upon them conditions of life which have kept down, although they have not absolutely lowered, their standard of life. Extremes of wealth and alienation of social classes have become so great as to arouse the apprehension of all thoughtful men. Labor riots that call for military interference testify to the fact that we have not escaped, that in the future we can hope less and less to escape, the friction that accompanies all unfraternal relations among men. We have been greatly blest in that we have escaped the worst results so long.

Concentration and Integration of Modern Industry.— Thus far we have been considering the effects of competition chiefly upon the laborers, and in tracing these effects the history of England has been peculiarly instructive. When, however, we turn to the results of such competition in the case of employers, we find that our own country offers the most striking illustrations. Owing to the peculiar circumstances of our situation, the results of competition among employers have developed more rapidly here than abroad. Though repeated conflicts with their workmen have led to a certain feeling of common interest in the matter of labor, and even to frequent combinations for mutual defence against the demands of employees, yet on the other hand the principle of competition has made them almost Ishmaelites in their business relations with one another.

Those resources to which we have referred as mitigating the sufferings of employees have not in the same way been available to the employers. Tied down to their large investments of fixed capital, they have been compelled to stand and fight out to the end the war without quarter. In every such warfare the number of combatants tends to decrease. As old rivals are killed off, the successful acquire greater skill and greater power in the conflict. With the passage of time greater and greater equipment is required to give any hope of a successful struggle. There are industries in which no such concentration has taken place, but for a great and apparently growing number of industries our description holds true. Thus, in spite of the enormous growth of our industries and population, the number of competitors in many industries has of late shown noticeable decrease. We cite

but one instance, and that not the most striking, from the twelfth census of the United States : "The present tendency toward large industries under one management is illustrated in the statistics of coke production in 1899. The total amount of coke produced has increased 96.2 per cent, and the value of all products" (including by-products) "has increased 115.7 per cent, while the number of active establishments reporting for 1899 was only 23, or 10.6 per cent more than the number reporting for 1889." This is typical of what is taking place in an increasing number of industries. Competition of small producers attained its maximum in the decade between 1870 and 1880, when it became familiarly known as "cut-throat" competition. But for the existence of free land, undeveloped resources, and the constant increase of inventions, widespread disaster must have resulted. Since that time the relative number of competitors has kept on decreasing, as our illustration shows, and many lines of industry have fallen into fewer and fewer hands. Many instances might be cited in which there has been not merely a relative but even an absolute decrease in the number of competitors.

Recently the movement toward large scale industry has taken on another phase. In addition to *concentration* or centralization of industry, we are now having a rapidly increasing *integration* of industry. Large business concerns are finding it profitable to carry on, under one management, several closely related industries. Thus there are many cases of integration where a manufacturing concern produces its own materials and its own machinery, and provides in part its own transportation facilities.

Monopolies. — Centralization of industry may be incom-

plete or complete. When it is complete, we have an entire industry under the management of a single individual, partnership, or corporation. When such a state of things exists, or is so nearly approached that a single unified management can exercise control over the supply, and hence over the price, of the product, we have a monopoly. Incomplete centralization may not lessen competition at all; it may even increase the sharpness and bitterness of the competition. It simply gives business into the hands of those producers who are best able to continue it under the vigorous conditions which existing competition imposes upon the rivals.

We might naturally expect that where the tendency to centralization is strongest, as in the United States, the tendency to complete centralization, or monopoly, would also be strongest, and American experience would seem to justify the expectation. Thus two of the great problems now before the people of our country are those connected with the concentration and integration of industry, which leads to the so-called trusts, and with the complete centralization of an industry, which is monopoly. It is particularly in the class of so-called *natural monopolies* that the development has in recent times been most rapid and most startling. Natural monopolies are those that rest, not upon the will of society, but upon conditions inherent in the nature of the business itself. Such are all the monopolies of transportation and communication. The reason for the unusual development of these monopolies in recent days lies in the fact that the whole transportation system of the world has been developed within little more than fifty years.

II. STATE REGULATION OF COMPETITION IN THE UNITED STATES

Labor Legislation in the United States. — We have already noted and explained the fact that the misery and degradation of the wage-earning classes, which in England led to a reaction in favor of an active policy of government, were not felt so quickly nor so keenly in the United States. With us, therefore, there was in earlier days no urgent demand for legislation in behalf of the laborers. Similar conditions, however, led in the end to like results, and in most of the commonwealths of the American Union we have a considerable body of factory legislation for the protection of the wage-earners and for the promotion of their welfare. Massachusetts, among the foremost in the extent of her manufacturing interests, is naturally among the foremost also in the matter of labor laws, her factory legislation being surpassed only by that of England. The growth of such legislation in our country illustrates the principles which we have already explained, for it has followed the line of industrial development as it spread from New England to the West and South. Indeed, there is special illustration of what we have been explaining in the recent labor experience of certain Southern states which have only recently entered extensively into manufacture. It is found that those states, which have recently begun to compete with Massachusetts, all repeat many of the darkest pages of early English experience, and that while they are possibly gaining a temporary industrial advantage over the older state, public opinion is rapidly organizing to protest against a temporary industrial advantage being gained at the cost

of the permanent welfare of the workmen of the South as well as in Massachusetts. True, some of the advantages possessed by the Southern states are derived from climate, proximity to raw material, the absence of antiquated machinery, etc., and if these advantages are not offset by the better labor market of Massachusetts, her greater accumulation of capital, with lower interest charges, her lower freight charges, her nearness to the consumers' markets, her helpful traditions of production, etc., the new states will confer a benefit upon society by producing the goods, even though it be at a serious temporary cost to the old New England state. In any event, the South must in time follow England and Massachusetts in regarding higher and more permanent interests than the mere increase of output.

Legislation against Adulteration.—America and England have also differed in their readiness to give heed to the adulteration of goods and the falsification of wares. And yet we have certainly had need of some action in these matters. Not only have we become painfully familiar with the style of goods which unrestrained competition always produces, and which are known in England by the expressive term "cheap and nasty," but we have also with us, as commonly as anywhere in the world, adulterations that menace life and health. The fact that the theory of non-interference has never been so completely shattered as in England by the pressure of labor interests, coupled with the fact of the delicate balance of authority between state and Nation, probably accounts in considerable measure for our general reluctance to intrust to government the duty of inspecting wares. Within the last few years more serious attention has been given to

the matter, the Federal government and many states have moved rapidly and vigorously in the prevention of adulteration, and the growing interest in economic questions is likely to result in a better realization of our co-operative power and duty.

The State and Monopolies. — The question of the right relation of the State to industry has nowhere proved more embarrassing and difficult than in the case of monopolies, and especially of the great class of monopolies which we have called natural. Here, even more than elsewhere, it has been brought home to men that the principle of State passivity cannot safely be accepted. The history of attempts to control these monopolies is long and confusing, but we may distinguish three fairly distinct methods: attempts to enforce competition, public control,¹ and public ownership.

1. *Attempts to enforce Competition.* — When the monopoly problem on a vast scale first presented itself, society was still possessed by the idea of the beneficence of the universal rule of self-interest. It was natural, therefore, to attempt to enforce competition in the new field of industry. Railway charters and charters for municipal service corporations were granted freely, even recklessly, in the belief that competition would thus be secured. But competition cannot exist where monopoly is natural. The whole history of attempts to secure such competition is a history of failure. A single illustration may serve

¹ Frequently the expressions State control and State ownership are employed, this word "State" then being used in its generic sense, and meaning the local unit and nation, as well as the separate state. The ambiguity in the word "State" is avoided by employing the term "public."

our purpose. The state of New York gave a railway charter to the West Shore Company, which constructed a line parallel to that of the New York Central. In granting the charter, the state attempted to enforce real and permanent competition by the stipulation that the railway should never be sold to its rival. Yet after a few years of disastrous rate "wars" the new road was *leased* to the Central in 1885 for 475 years. The same experience has been repeated, again and again, as often as the experiment has been tried.

2. *Public Control.* — The second method of solving the social problem involved in natural monopolies is that of public control or regulation. This method began to be tried about forty years ago with the rise of the "granger" movement, which was at first a mere unorganized uprising of farmers against railway abuses, but which later developed into an organized movement, having as its centre the "Order of the Patrons of Husbandry," founded in 1867. The result was that many states passed laws regulating railway rates and binding the roads by other rules of action. Much of this legislation was so ill considered that it was soon repealed, and the movement itself was thereby for a time discredited. But a renewal of the effort has resulted in the creation of state and Federal railway commissions, with certain powers of supervision, adjudication, and control.

The policy of public control has hitherto proved difficult of application, not only in the case of railways, but also in the case of the large class of municipal natural monopolies. Wealthy corporations, retaining the best legal talent, have shown endless ingenuity in evasion, and great power in retaliation, as is abundantly shown in

the annual reports of the United States Interstate Commerce Commission. Yet distinct gains have been made, largely through the influence of educated public opinion, in removing abuses from the railway service, and in safeguarding the interests of cities in their granting of municipal franchises.

3. *Public Ownership.* — The great difficulties in the way of successfully applying the first two methods have led a growing number of people to look with favor upon the method of public ownership of natural monopolies, with or without government management of the business. In the case of municipal waterworks, the practice already obtains very generally. An increasing number of cities have taken in their own hands other forms of municipal service. Technical and political considerations make it quite possible that a given city may wisely own one form of municipal monopoly and at the same time refrain, with equal wisdom, from taking over others. We cannot here discuss these many considerations, but in closing we may express the opinion that the tendency seems increasingly toward this third policy of dealing with monopolies. Certainly, the solution of the monopoly problem lies to-day between the methods of public regulation and public ownership. Which one, if either, will in the end prove the sole reliance of society, it would be rash to attempt to predict.

SUMMARY

1. In the United States, owing to free land and the lack of manufacturing, the transition to the industrial stage was not marked by violence or suffering.
2. The intensity of competition in the United States has been felt more keenly by the manufacturers, and concentration of industry has thus been hastened.

3. The tendency to complete centralization of industry, or monopoly, gives rise to grave social problems.
4. Three methods of solving the monopoly problem have been tried: artificial competition, public control, and public ownership.
5. American experience confirms that of England in condemning unrestrained competition.

QUESTIONS

1. Contrast the Industrial Revolution in the United States with the same change in England.
2. What has been the effect of the mobility of population in the United States?
3. What is integration of industry? Complete centralization? Natural monopoly?
4. Discuss the different experiments in attempting to solve the monopoly problem.
5. Mention some of the ways in which the government in the United States regulates competition.

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BOOK III

ECONOMIC THEORY

PART I.—CONSUMPTION

CHAPTER I

INTRODUCTORY

UTILITIES AND Goods

WE have now studied the history of man's efforts to get a living, and the fundamental conditions which determine all his efforts to that end. We have now to study analytically the process by which he gets his living to-day, remembering that the process is conditioned fundamentally, and that those fundamental conditions have their roots far in the past.

Reason for studying Consumption First. — When we inquire why men display what we call economic activity, we discover at once that it is because they have wants which they aim to satisfy. Most immediately connected with wants in any analysis of the subject is the satisfaction of them, and therefore it is not illogical to study first of all that branch of the subject which we have called by the name "consumption."

Definitions. — When anything has the power of satisfying human wants, we say that it is a good thing, or that

it possesses utility. In economics, these words "good" and "utility" are made to apply to the things or services themselves. To give a definition, therefore, we may say that *a good or utility is anything which can satisfy a human want*. And here we must pause to caution the student that the word "good" is applied to any such thing even though the thing ministers to a want which were better left unsatisfied. The idea from the economic standpoint is simply that the thing is good in the sense of being adapted to the want, however reprehensible the want may be. Notice that this definition of the term "good" includes not merely material things such as food and clothes, but also such immaterial things as personal services. The advice of a physician and a new invention are goods that we desire and are willing to pay for, but they do not exist in any physical form. Goods or utilities, then, may be divided into the two great classes of (1) material things, and (2) personal services.

Free Goods and Economic Goods. — When we come to analyze goods further, we find that some of them are given by nature in such abundance that all of us may have our wants for them satisfied without effort. Thus, air is a utility of the first importance; but in all ordinary circumstances it is so abundant that we can satisfy our wants for it without any exertion. All such goods are therefore called *free goods*.

But we find by hard experience that before we can satisfy many of our wants, either we ourselves must make efforts, or others must exert themselves for us. The reason is, that the supply of such utilities is limited either (1) by the *impossibility of increasing their number or amount at all*, as is the case, for instance, with paintings

by old masters, or (2) by the *necessity of labor and sacrifice for further increase in their supply*, as is the case with watches and houses, and, indeed, with the greater number of things with which we are daily brought in contact.

Inasmuch as these goods are limited in quantity, they can, as a rule, be obtained only by human exertion or sacrifice. And being thus obtained, they can be exchanged or transferred from hand to hand by those who possess them. Of course, many goods—land, for instance—are of such a nature that they cannot be readily transferred or, in some cases, be actually transferred at all. In such cases, transfer of title takes the place of actual transfer of the goods. Again, it is, of course, impossible for one man to transfer to another any special ability that he may possess. But the services which such special ability may enable one to render may be exchanged for the services of others or for material goods, and we may regard such services as falling in the same class with the other goods which we have been describing. All such goods we call *economic goods*, because they are the ones which man spends his life in acquiring, and because the wants for them and the efforts and sacrifices made in obtaining them are susceptible of such money measurement as enables them to be the subject of scientific analysis. To sum the matter up in the form of a definition : *Economic goods are goods which are so limited in quantity that their possession, on the one hand, regularly requires exertion or sacrifice, and, on the other hand, gives the opportunity of transferring or exchanging them.*

When we speak of *economic goods taken collectively* or in a body, we use the word “wealth,” whether the body of such goods be great or small.

Different Kinds of Utility. — There are only four ways in which goods can satisfy our wants. In the first place, a good satisfies our wants by virtue of the elements of which it is composed. Thus, coal is so constituted that under certain conditions and in certain relations it produces heat. This utility which a thing possesses by virtue of the elements of which it is composed we call (1) *elementary utility*.

But the coal as it is in the mine is not ready to satisfy man's wants. It must first be broken up by the miner into such fragments as are convenient for man's purposes. Its form must be changed. This utility which a good possesses by virtue of the form in which it exists we call (2) *form utility*. Manufacturing gives as its result form utilities, and we generally think of manufactured products when we speak of this kind of utilities.

When the coal has been changed by labor into a form fitted for human uses, it is still necessary to convey it to those who are to use it. The new utility which is given to the coal by moving it from the mine to the place where it is to be used we call (3) *place utility*.

Finally, this coal which possesses *elements* fitting it for human use, which has had its *form* changed by the miner, and which has now been transported to a *place* convenient for its consumption, is kept until the *time* when it is to be used. The utility which a good possesses by virtue of its being present at a time convenient to the consumer we call (4) *time utility*.

Elementary utility, form utility, place utility, and time utility : these, in their logical order, are all the kinds of utility that any goods ever do or can possess. Goods about to be consumed of course have all four kinds of

utility ; but in the case of any particular commodity some one utility is likely to be of special importance. Thus, ice in summer has as its most evident utility that of time. In the same way, great place utility is added to tea when it is carried from Japan or Ceylon to the consumer in an American town.

Wealth Consumption. — Man satisfies his wants by the enjoyment of these utilities which we have been describing. In many cases enjoyment of such utilities involves their destruction by the person who enjoys them. But there are other things whose utilities are not destroyed by the user, but by the elements. In such cases, the destruction is usually gradual and slow. Thus, a house furnishes its utilities to the user over a long period of years. *The direct satisfaction of human wants by the enjoyment of the utilities in goods is called consumption.* When goods afford such direct satisfaction only in a single act of enjoyment, they are called *perishable* goods. Such, for instance, are coal and food. But a house, a book, or a carriage affords satisfaction of human wants in repeated acts of using. To take an extreme instance, land may be made to afford satisfaction of human wants through all time. These are *durable* goods. Defining, we may say that *perishable goods are those that lose their utilities in a single satisfaction of human wants; durable goods are those that afford repeated satisfaction of human wants.*

Productive Consumption. — Some authors include under the name consumption a destruction of utilities which is designed to result in the creation of new and greater utilities. Thus, when coal, instead of being used in a residence to warm the occupants, is used in the engines of a factory, it is often said that the coal is being con-

sumed productively. If we call such consumption *productive consumption*, we must use some distinguishing word in referring to a destruction of utilities which satisfies human wants directly. The expression adopted for this purpose is *final consumption*. But since productive consumption is only a part of the process of production, we may fairly confine the use of the word "consumption" to the final and immediate satisfaction of human wants by the enjoyment of the utilities afforded by goods.

Relation of Consumption to Production. — We must, for scientific reasons, keep somewhere a distinction between consumption and production, although, as appears above, the two often shade into each other. Consumption and production are correlative. Consumption furnishes the motive to production. Production affords materials and services for consumption. Consumption makes production necessary at the same time that it makes production possible. To sum up in a word, consumption is the end and means of production, and of all economic activity; production is the means of consumption.

SUMMARY

1. Since want satisfaction forms the motive to all economic activity, consumption may properly be made the first division of economic theory.
2. The character and extent of human wants have been progressively changing.
3. Want satisfiers are called utilities or goods.
4. Free goods are unlimited in quantity and cost us nothing; economic goods require economic activity in their getting and using.
5. There are four kinds of utility: elementary, form, place, and time.
6. Consumption is the use of goods in the final satisfaction of human wants.
7. Consumption is the end and means of production; production is the means of consumption.

QUESTIONS

1. Why is consumption first studied?
2. What is a utility? Illustrate. What are free goods? Illustrate. What are economic goods? Illustrate. Is water ever an economic good?
3. Give examples of elementary utility; of form utility; of place utility; of time utility. What utility does the miller produce? The railway? Explain the fallacy in the statement that the farmer is the only producer.
4. Give examples of perishable and durable goods.
5. Why cannot the name consumption be applied to the use of corn in fattening hogs? In what sense is coal burned in a factory furnace consumed? Is the consumption of food by laborers final or productive consumption? Explain.

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CHAPTER II

THE LAW OF DIMINISHING UTILITY

Illustrations of the Law.—The wants of men are innumerable and, considered as a whole, are never satisfied. There seems to be no limit to the variety of things desired. But if we single out any one commodity, we find that our desire for it is limited. We have all heard of the king who wanted gold and who got so much that he finally loathed the sight of it. The story of King Midas is but an illustration of what the economists call the *law of diminishing utility* or the *law of satiable demand*. Let us consider the case of a desert traveller who, having long before exhausted his supply of water, comes upon an oasis with a cooling spring. The first cup of water may save his life, and would therefore have a utility which we may call *absolute*. A second cup may still have a very high degree of utility ; but if we suppose him to continue the drinking, we know that the later additions to his satisfaction will gradually grow less and that he cannot go on long without coming to a point where any further consumption will cause not pleasure but pain.

This is graphically represented in the figure on page 88.

In the figure, let the equal spaces 1, 2, 3, 4, 5, 6, 7 on the line *AB* represent equal portions of water, and let the perpendicular lines represent the height to which satisfac-

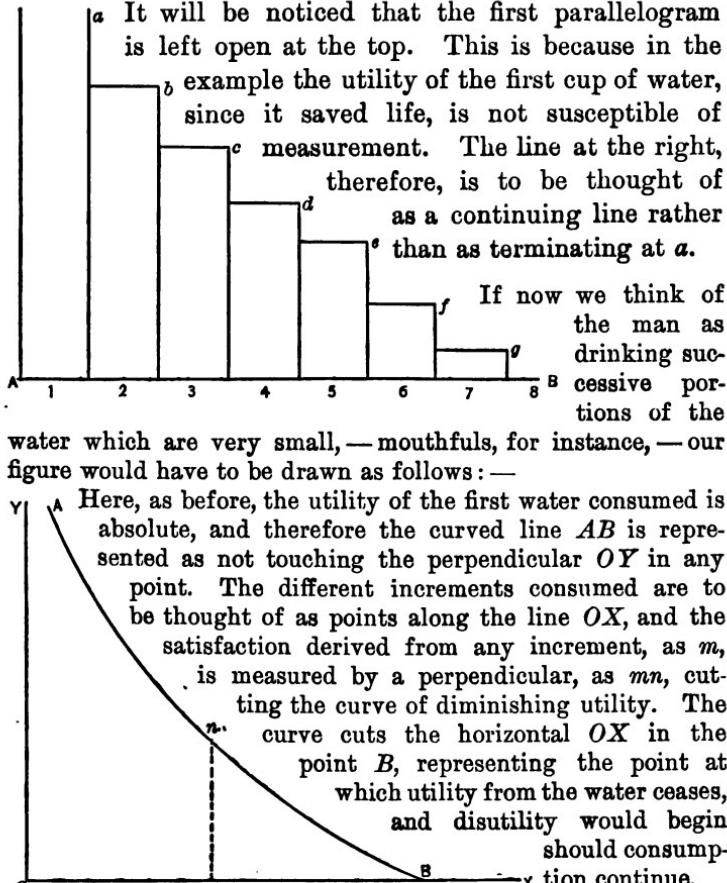
tion rises in drinking the respective portions. Then the parallelograms would represent the total satisfaction derived from the successive acts of consumption.

a It will be noticed that the first parallelogram is left open at the top. This is because in the example the utility of the first cup of water, since it saved life, is not susceptible of measurement. The line at the right, therefore, is to be thought of as a continuing line rather than as terminating at a.

If now we think of the man as drinking successive portions of the water which are very small,—mouthfuls, for instance,—our figure would have to be drawn as follows:—

Here, as before, the utility of the first water consumed is absolute, and therefore the curved line AB is represented as not touching the perpendicular OY in any point. The different increments consumed are to be thought of as points along the line OX , and the satisfaction derived from any increment, as m , is measured by a perpendicular, as mn , cutting the curve of diminishing utility. The curve cuts the horizontal OX in the point B , representing the point at which utility from the water ceases, and disutility would begin should consumption continue.

With the figures and example clearly in mind, let us now consider some of the particulars. Each unit of the commodity consumed is



called an *increment* of supply or an increment of consumption. The utility of the first unit, which in this case is absolute, is called the *initial* utility. The utility of all the increments taken together, which in the diagram would be represented by the plane surface YOB_A , is called *total* utility. The potential utility of an increment not actually possessed or consumed is called the *marginal* utility. But note this. In our diagram and in the example, we have assumed that the consumption of water is carried to a point beyond which further consumption would give no satisfaction, and therefore the marginal utility in this case is 0. But if we had assumed that the consumption had stopped at m , then the marginal utility of the consumption would be represented by the utility of the unit m , as measured by the perpendicular mn .

But the law which we are studying is of wider application than to the mere case of consumption. It applies as well to possession. Whenever we have a stock of any commodity, we realize that the commodity has a utility for us even when we are not in the act of consuming it. The law applies therefore to the utility of the commodity whether we are actually consuming it or are retaining the power to consume it at some future time.

Formal Statement of the Law. — We are now prepared to understand a formal statement of the important economic law of diminishing utility. It is as follows: *At any given time the marginal utility of any commodity to its owner decreases with every increase of the stock of it.*

Limitation. — Notice that this statement of the law contains the qualification, *at any given time*. The importance of this qualification becomes evident when we return to a consideration of our illustration. We know that when the utility of water has fallen to zero, it needs not long to wait before the satisfaction to be derived from con-

sumption again becomes keen. With the consumption of some things, the importance of the qualification becomes even greater. A boy finds that any clothing beyond a very small amount has a low added utility for him. But as he grows into young manhood, his wants change so far that a much larger supply of clothes has as great a marginal utility as his slender stock possessed before. Whenever different times are considered, therefore, we must make complete allowance for the change of wants in the interval.

The Case of Money.—With this in mind, we may say that the law of diminishing utility applies to money as to all other goods, although the rate of diminishing utility is much slower, because money represents general purchasing power and permits variety in consumption. With variety in consumption, as we all know from experience, satiety is reached more slowly than without it. Nevertheless, at any given time the hundredth dollar of one's stock has a lower utility than the ninety-ninth or any other preceding one. Thus it follows that to a rich man, other things being equal, money has a less marginal utility than to a poor man.

SUMMARY

1. The law of diminishing utility explains how increasing supply means decreasing utility per unit of supply.
2. Initial utility is the utility of the first unit; marginal utility, the potential utility of a unit not possessed; total utility, that of all the units.
3. The law of diminishing utility applies to money as to other commodities.

QUESTIONS

1. How great is the marginal utility of air under ordinary circumstances? Why?

2. How does the law of diminishing utility apply when the consumption of commodities is carried beyond the point of zero utility? Illustrate by diagram.
3. Give illustrations of the importance of the qualifying phrase "at any given time."
4. What significance has the law as bearing upon the comparative condition of the rich and the poor?

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CHAPTER III

DEMAND

The Economic Order of Consumption. — It follows from the law of diminishing utility that men in satisfying their wants consume commodities in a fairly regular order. So far as they consume things to the best advantage, their consumption is based upon a balancing of these two considerations, — the *utility of the goods, and the cost of procuring them.* Therefore, in deciding what wants they will first satisfy, *they will choose those commodities which promise the greatest surplus of utility over cost.* At first thought the matter is indeed simple. To a starving man, the want for food — or the marginal utility of food — is so great that he devotes all his energies to satisfying that want. But when his hunger has been somewhat appeased, the unsatisfied want — the marginal utility — of some other good appears great by comparison, and he turns his energies in that direction. From these instances it might, indeed, appear that men always seek to get those things for which they have the greatest unsatisfied want; in other words, that they try to keep the marginal utilities of all commodities equal. But a moment's reflection will make it evident that the different degrees of sacrifice involved in getting the different commodities prevents any such adjustment of marginal utilities. My desire for an

automobile may be vastly greater than my desire for a camera, but if I must sacrifice a whole year's income to get the automobile, I may prefer to purchase the camera. It is the relation between the unsatisfied want and the sacrifice required to satisfy the want that determines our choice.

To make this clearer let us take a detailed example. Suppose a boy with twenty-five cents of spending money standing before a booth at a fair, and bent on satisfying a want for goods there displayed. If peanuts are five cents a pint, it may be that his liking for them will be great enough to cause him to make a pint of them his first purchase. But he knows that a second pint will satisfy a want less keen than is satisfied by the first. We may imagine him, then, spending his second nickel for popcorn. In the same way, it may be, a first glass of lemonade will give him greater enjoyment than would a second pint of peanuts or a second bag of popcorn. It is possible that he has no strong desire for the other goods displayed, and that he can get greater satisfaction from a second pint of peanuts than from anything else that he could purchase, although they will afford less enjoyment than he will have from either the popcorn or the lemonade which he has bought. Again, it is quite possible that he will like a second glass of lemonade better than a third pint of peanuts or even a second bag of popcorn, because the action of the law of diminishing utility is more rapid in his consumption of popcorn than in his consumption of lemonade. Now the boy has purchased with his five nickels two pints of peanuts, one bag of popcorn, and two glasses of lemonade. The case is the same whether he buys them all at the same time or distributes his purchases throughout an afternoon. He makes his purchases according to his judgment as to their varying utility in such a way that he will receive the maximum enjoyment from his expenditure.

Illustration by Diagram. — Let us illustrate this as before by a diagram, as on page 94: —

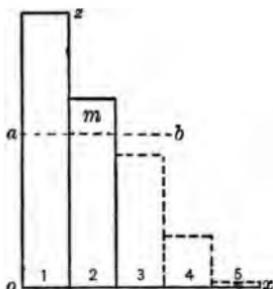


FIG. 1

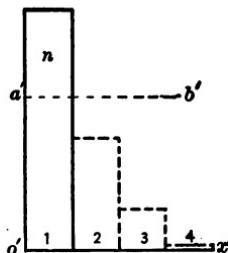


FIG. 2

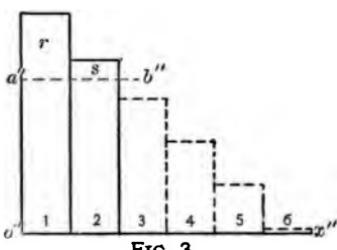


FIG. 3

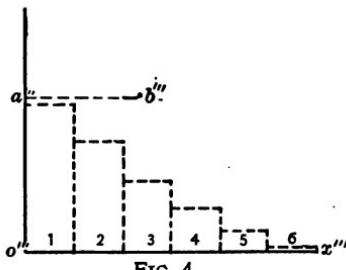


FIG. 4

In these figures the lines ox , $o'x'$, $o''x''$ represent amounts of the respective commodities which would reduce the marginal utility to zero; in other words, they represent amounts such that in no case would the boy care to consume them further. Let the parallelograms represent the satisfaction derived from the consumption of the different units. It will be noticed that the utility of the first unit is greatest in the first diagram, and that it becomes less in each succeeding figure, but that the utility diminishes more slowly in Figure 3 than in Figure 2. Now let the cost of each unit be measured by the distance between ox , $o'x'$, etc., and ab , $a'b'$, etc., since this distance is the same in all cases, and in our illustration measures the five cents which each unit costs. In the diagrams it is evident that the first purchase will be made of the commodity represented in Figure 1, since the surplus of satisfaction over cost is

greatest in that case, this surplus being measured by the parallelogram az , which is larger than any of the corresponding parallelograms m, n, r, s . The parallelogram n , which represents the surplus of utility over cost of the first unit of the second commodity,—in our illustration, popcorn,—is greater than the parallelogram m , which represents the surplus of utility from a second unit of the first commodity, and is also greater than the parallelogram r , which represents the surplus utility from a first unit of the third commodity,—in this case, lemonade. It will, therefore, represent the second purchase. In the same way r , being next in size, represents the third purchase; m , the fourth; and s , the fifth. Notice that while the first unit of the second commodity affords a surplus, the second does not. Again, notice Figure 4, which represents some commodity that the boy is not tempted to purchase with the stock of money in his possession.

It will be interesting and valuable practice for the student to vary these figures to represent different suppositions regarding consumption, and to carry the process one step farther by supposing the units of the commodity to be so small that the diminishing utility will be represented by a curved line instead of by the broken lines that form the top and part of the right side of the parallelograms in our illustration. Another variation might well be to have the costs vary from commodity to commodity.

We are now prepared for a formal statement regarding the economic order of consumption. So far as commodities are purchased and consumed rationally and economically, (1) *choice is in every case determined by the amount of the surplus of utility over cost.* It follows as a natural corollary that (2) *each successive choice is dictated by the desire to have the surplus of utility of the commodity about to be consumed greater than the surplus which any other commodity of equal cost could yield.*

How Economic Importance is Determined. — Each consumer estimates the economic importance of any commodity, not upon the basis of its total utility, but upon the basis of its marginal utility. In other words, its importance is measured, not by the total amount of satisfaction that it can afford, but by the keenness of the desire or want that he would feel if deprived of any portion of the supply. If I were where I could not make any purchases of goods, nor add to my stock in any way for a considerable time, and if I had in addition to other goods fifty barrels of flour and only three pounds of sugar, I should evidently husband the sugar more carefully than the flour. In other words, I should calculate that with the existing stocks a pound of sugar had a greater economic importance for me than a pound of flour. If, however, instead of the greater quantity of flour, I had so little that ordinary consumption would use it up before the stock could be replenished, I should attach the greater economic importance to the flour instead of to the sugar. In each case my reason would be the same. In the first case sugar would have a greater marginal utility than flour, because diminution in its supply would leave me with an unsatisfied want keener than would follow from an equal diminution in the stock of flour. But in the second case the flour would have the greater marginal utility, since a decrease in its supply would involve actual hunger before the stock could be replenished.

It is instructive to compare the relation between the marginal utilities of two commodities with the relation between their total utilities. Thus, a pound of gold has a greater economic importance than a pound of iron; but the total amount of iron in existence has greater importance than the total amount of gold.

THE LAWS OF DEMAND

We have already explained that the study of human wants is directly connected with the study of consumption, and that the study of consumption leads to the study of demand. But we must note that a want for anything is not the same thing as a demand for it. "If wishes were horses, then beggars might ride." In order that there may be a demand for a thing, there must be not only a desire for it, but also the willingness and the ability to offer for it some sacrifice. In other words, to speak in the language of everyday life, we must not simply want the thing, but we must want it enough to pay for it. It must be remembered, therefore, that in economics, *demand means desire backed up by means or purchasing power.*

But in addition to this definition of the real meaning of the word "demand" in economics, we need a definite way of measuring its intensity. Such a method of measurement is found in *the number of units of any commodity which will be purchased at a given price.* If a table be constructed of the different quantities of a commodity which would be purchased at different prices, such a table will describe what economists speak of as the *state of demand* for the commodity. If to-day the people of a certain community are willing to buy

100 bushels of apples at \$2.00 per bushel,

300 bushels of apples at \$1.00 per bushel,

500 bushels of apples at \$0.75 per bushel,

this list or table, we say, shows the present state of demand for apples in the community. The demand for a commodity is said to increase when the quantity that will be taken at a given price increases.

Let us now consider one by one the conditions which determine in any case whether the demand shall be large or small. The formal statement of these conditions may be regarded as a statement of the *laws of demand*.

1. *The Quantity demanded varies directly with the Marginal Utility.* — Suppose, in the first place, that the price of a certain quality of tea remains during a certain period at fifty cents the pound, and that during the same period the wealth of the consumers also remains the same. Then it is evident that if the public taste for any reason changes in such a way that the marginal utility of tea becomes less or greater, the demand will fall off or increase to correspond. The importance of this law is especially evident in the case of commodities the demand for which is subject to sudden and violent fluctuations through changes of fashion.

2. *The Quantity demanded varies inversely with the Price.* — Again, suppose that the wealth of consumers remains the same, and that there is no change in the marginal utility of the commodity. Then it is evident that the amount demanded will be greater when the price is low and smaller when the price rises. The relation between price changes and resulting changes in demand varies with different commodities. Thus, in the consumption of wheat, for instance, while it makes a difference in the demand whether the price stands at fifty cents or at a dollar a bushel, the difference is not so great as in the case of articles which satisfy less urgent wants. On the other hand, a fall in the price of certain articles, especially luxuries, is promptly followed by a greatly increased demand. When changes in demand resulting from changes in price are relatively great, the demand is said to be *elastic*.

3. *The Quantity demanded varies directly with the General Wealth.* — In the third place, if we suppose the marginal utility of any commodity and its price to remain the same, it is evident that anything which increases the purchasing power of the community will increase its demand for the commodity. For increase of wealth, as has been explained, lowers the marginal utility of money, and makes it possible to spend more for other commodities without losing that surplus of utility over cost which determines purchases. As is pointed out elsewhere, it is the general wealth of the people of our country, leading to an increased demand for commodities, that offers the special opportunity for abnormal profits to monopolists. The monopoly price—or the price at which a monopolist can secure the greatest net returns—is regularly higher in the United States than in the countries of Europe.

The whole law of demand, then, may be summed up in a single statement as follows : *The quantity demanded varies (1) directly with changes (a) in the marginal utility and (b) in the purchasing power of the community, and (2) inversely with changes in price.*

Statistics of Private Consumption. — Further light is thrown on the principles which we have been studying by the actual facts regarding the expenditures and consumption of families. A detailed statement of the income and outgo of a family is called a family *budget*. Careful studies of such budgets have been made in Prussia and Great Britain and in some of our own states, notably Massachusetts and Illinois. On the basis of the Prussian statistics, the table of percentages on the following page has been prepared.

ENGEL'S LAW.—PRUSSIA

ITEMS OF EXPENDITURE	PERCENTAGE OF THE EXPENDITURE OF THE FAMILY OF		
	A working-man with an income of from \$225 to \$800 a year	A man of the intermediate class ("mittelstandes") with an income of from \$450 to \$600 a year	A person in easy circumstances ("des wohlständes") with an income of from \$750 to \$1100 a year
per cent	per cent	per cent	per cent
1. Subsistence	62.0	55.0	50.0
2. Clothing	16.0	18.0	18.0
3. Lodging	12.0	12.0	12.0
4. Firing and lighting	5.0	5.0	5.0
5. Education, public worship, etc.	2.0	3.5	5.5
6. Legal protection	1.0	2.0	3.0
7. Care of health	1.0	2.0	3.0
8. Comfort, mental and bodily recreation	1.0	2.5	3.5
Total	100.0	100.0	100.0

The following table permits a comparison between the conditions obtaining in different countries:—

COMPARATIVE PERCENTAGES OF EXPENDITURES BY THE FAMILIES OF WORKINGMEN IN ILLINOIS, MASSACHUSETTS, GREAT BRITAIN, AND PRUSSIA

ITEMS OF EXPENDITURE	ILLINOIS	MASSA-CRUSSETTS	GREAT BRITAIN	PRUSSIA	AVERAGE
Subsistence	41.38	49.38	51.36	55.00	49.25
Clothing	21.00	15.95	18.12	18.00	18.27
Rent	17.42	19.74	18.48	12.00	15.66
Fuel	5.63	4.30	8.50	5.00	4.61
Sundries	14.57	10.73	18.54	10.00	12.21
Total	100.00	100.00	100.00	100.00	100.00

As a result of his study of Prussian family budgets, Dr. Ernst Engel, an eminent Prussian statistician, laid down the following general laws of consumption, which is sufficiently illustrated in the tables just given :—

As the income of a family increases,

- (1) *The percentage of expenditure for food decreases; ✓*
- (2) *The percentage of expenditure for clothing remains approximately the same;*
- (3) *The percentage of expenditure for rent, fuel, and light is invariable;*
- (4) *The percentage of expenditure for education, health, recreation, etc., increases.*

From the figures given in the tables it is evident that demand for food in any community is little elastic, since enough for subsistence is required in any case, and the relative amount demanded by all classes falls off rapidly as these needs are satisfied. On the other hand, increased wealth results in an increasing demand for all the manifold goods and services that minister to culture wants.

Since the satisfaction of man's higher wants is necessary to his complete efficiency as a producer, we can understand from the tables how it is that "the destruction of the poor is their poverty." They live in a vicious circle. The poverty to which they are born is itself the bar to their escape. Once free them from this condition, and the power to perpetuate their own prosperity is given into their hands ; for they thus become more efficient as producers and more skilful in securing a just share in the increased product of their labor.

SUMMARY

1. Men seek in their consumption to secure the greatest possible surplus of utility over cost.
2. The economic importance of a commodity is determined by its marginal utility.
3. The quantity demanded varies directly with the marginal utility of the goods and the wealth of the consumers, and inversely as the price.
4. Increase of fortune usually means an increase of expenditure for the comforts and decencies of life.

QUESTIONS

1. Draw diagrams roughly representing the initial utility and the diminishing utility of some different kinds of consumption in your own case.
2. Which has the greater economic importance for men, water or gold? Water or wheat? Why? Contrast other commodities in the same way.
3. How do we estimate marginal utilities in everyday life?
4. What would be the relative effect upon demand for automobiles and wheat if the prices of both should fall proportionally? Why has the price of copper remained high in spite of the great increase in its supply? How does the sudden death of a President affect the demand for mourning goods? Why?
5. What percentages of their incomes do different persons in your community spend for the different kinds of things mentioned in Engel's law?

LITERATURE

See preceding chapters. Also, on Engel's law:—

Roscher, W.: *Principles of Political Economy* (Translation), Vol. I, Ch. I, §§ 1-6.

The Seventh Annual Report of the United States Commissioner of Labor gives the results of other investigations.

CHAPTER IV

THE ECONOMY OF SPENDING AND SAVING

Two important questions regarding economy in consumption remain to be studied. The first question is, briefly, How can one's whole expenditure or consumption be so distributed between the present and the future that the greatest amount of satisfaction will result? The second question assumes that the first has been answered, and asks how the consumption of the present may be so ordered that it will result in the greatest total of satisfactions? Though both questions really have to do with expenditure, still we commonly think of the first as the problem of saving, as distinguished from the problem of spending, which is represented in the second question.

I. THE ECONOMY OF SAVING

First of all it should be noted that the proportion between present and future expenditure conforms to the general rule which has already been laid down as the law of the "economic order of consumption." We seek always in our expenditure to secure the greatest surplus of utility over cost; hence we discontinue present expenditure when we feel that we can secure a greater surplus of utility by applying any remainder of our purchasing power to future purchases. Of course, with many people the demands of the present are so urgent and their means so limited that there is little opportunity for any such balance-

ing of present and future surpluses. But whenever there is any saving at all, it proceeds according to the mental comparison just explained.

Hoarding. — But how are goods saved? Manifestly, we may save goods in such a way that neither we ourselves nor others can enjoy them in the present. Thus it is claimed that the peasants of France are so distrustful of banks that they lay by or *hoard* their savings in secret places about their homes. Such saving, though it is not the best, is better than harmful or luxurious consumption in the present; for if the goods, for instance, money, be stored away in such a manner that they will not suffer harm, they may in the end minister to real and commendable wants.

Investment. — But in modern times, with security of property guaranteed by a strong government, and with easy opportunities for devoting savings to productive uses which will return a regular income, most provident people prefer saving by *investment* to saving by hoarding. Moreover, as industry becomes more complicated and requires more and more skill for successful management, a greater number of people prefer to intrust their savings to the hands of others rather than to invest them directly. The process is even carried one step farther in the majority of cases. Instead of lending their savings directly to those who manage productive enterprises, men deposit their savings, in the form of money or credit instruments, in banks, and the banks in turn take it upon themselves to decide in what enterprises such savings may be most safely and profitably invested.

The difference between hoarding and saving by investment is, briefly, that in the one case the goods *may*ulti-

mately be used productively and economically, while in the other case the goods saved *are saved by being used thus productively.*

The fact that money represents goods in general is likely to cause us to overlook the real nature of saving. From the *individual* standpoint, saving means the postponement of consumption. When a man saves five dollars out of his week's income, he is postponing to a future time the exercise of his right to receive goods to that amount from his fellow-beings. He may do this either by hoarding the money or by lending it to some one else. But such acts do not necessarily result in saving from the *social* standpoint. Social saving means greater enjoyment in the future on the part of the community as a whole. If A lends to B money with which to buy a suit of clothes, A individually has saved, but there has been no social saving, for there will not be more goods to enjoy in the future on account of this act. But if, instead of asking other men to make a suit of clothes for him, B had told them to construct a machine, there would also have been social saving, since the machine would make it possible to produce more goods in the future. Modern societies save chiefly by bettering their facilities for producing goods; the amount of food, clothing, etc., that the people of the United States store up for future use is comparatively small.

We often hear men talking as if the man who spends money freely were a public benefactor, while the man who is not thus lavish is to be regarded with reproach. But it is plain from the foregoing that the former is using up goods and services now, while the latter may through his investments be improving the productive equipment of

society. The one is telling men to serve him in his home, in his stables, and aboard his yacht ; the other is setting them to work building factories—he is saving socially. It is true, this may be carried too far. Just as the farmer may have too many ploughs and wagons, so we as a nation may have built too many railroads and cotton factories for present needs.

II. THE ECONOMY OF SPENDING

Having considered the first of the two questions which were raised at the beginning of this chapter, we have next to consider the other,—the question of how to order one's present consumption that the greatest good may result.

First of all, for economy in spending, two things are essential, which we may call (*A*) *the economy of right choice* and (*B*) *the economy of right use*. The economy of right choice depends upon a correct knowledge of those present uses to which commodities may be most advantageously applied, while the economy of right use depends upon a knowledge of the most efficient means of applying the goods to those uses.

(*A*) *The Economy of Right Choice.*—1. *Luxury.* There is a lack of economy in consumption, due to a failure to exercise right choice, when men apply their means to the purchase of luxuries. Expenditure for luxuries, or luxurious consumption, is not economical consumption, because it does not adapt resources to their most advantageous uses. The subject of luxury is a difficult one to discuss, since a definition of the thing itself is by no means easy. Many things are to-day easily obtainable by the poorest which two centuries ago could be enjoyed only by the most wealthy and powerful. Such things are never

thought of as luxuries in modern days, but if their possession in the olden time required the exploitation of the poor and did not render their possessors able and willing to confer great social service in return, we must hold that they were then luxuries. To the illiterate man, a library is a luxury; to the scientist, it may be a necessity for complete efficiency. These illustrations may serve to show the difficulty of reaching any simple and clear definition of luxury, and the equally great difficulty of establishing any universal principles by which we may always judge such expenditure. Yet it is possible to lay down a definition which implies a principle of social economy in expenditure, and which suggests an ethical precept: *Luxury consists in any consumption of commodities and services which is seriously out of proportion to the social service that they render possible, but which is not of necessity directly injurious to the consumer.* As we have suggested, the principle here indicated should be used with caution. If the possession of great talents calls for large expenditure to render those talents more efficient, then small consumption would be wasteful, and large consumption would not be luxurious.

But, it may be asked, has not a man the right to do as he will with his own? And the answer must be, Yes, in a very full measure, if you judge right solely by the statute law. No court had appointed Cain to the guardianship of Abel. But the statute law follows only slowly and haltingly after the growing sense of right and duty as it develops in the race. The laws of to-day grant extreme rights of property and use, because it has been found that on the whole men have worked harder, produced more, and on the whole been happier when they were given such almost

unfettered rights of disposing of their product. Now, however, men are becoming more socially inclined. More and more, rich men and talented men are coming to regard their riches and their talents as trusts which have been committed to them, rather than as possessions which they may squander without a thought for their fellows. When this feeling of responsibility, of stewardship, becomes sufficiently developed, our law may safely be changed to recognize the change in the race idea, and to compel the unsocial to feign the virtue if they have it not. Indeed, save in exceptional instances, there may be no need for a change in the law, since public opinion would be sufficiently powerful to accomplish the purpose of checking lavish display.

Caution.—But we must revert to our caution. Too great penuriousness is an evil only less serious than prodigality. We must not forget that a rational expansion in the number and variety of human wants is necessary to human progress.

2. *Harmful Consumption.*—In speaking of luxurious consumption, we have said that it does not necessarily involve immediate and direct harm to the consumer himself. When such harm does result, it is more usual to speak of the consumption as harmful rather than as luxurious. It goes without saying that harmful consumption calls for the censure of the economist no less than for that of the ethical teacher, since it is in the highest degree wasteful, whether regarded from the standpoint of the individual or of society. When a nation devotes a large amount of its labor and capital to the production of commodities which, in their consumption, cause more misery than happiness, and weaken the nation's future resources of energy and

intelligence, there is a departure from economical consumption so serious as to call for the severest condemnation. If society would forego such injurious consumption, bread would be cheaper, higher wants would find satisfaction, and man would be working away from the beast's low level of sensual gratification.

Some Rules for Economy in Choices. — We may exercise an influence over the growth of our own wants, in such a way that a great real satisfaction may flow from a comparatively small expenditure. Thus, (1) we should cultivate enjoyment or consumption that is *inclusive* or *inexclusiv*e rather than exclusive in its nature. It is evident that if a community can cultivate such a love for art that its satisfaction will consist in viewing beautiful pictures or statues rather than in owning them individually, it will be possible to secure such satisfaction by joint purchase most economically. Again, (2) we should cultivate *harmonious* consumption. We all know, to take a homely example, that bread and butter together give a greater enjoyment than would result from the consumption of the two separately. But harmony of consumption is by no means limited to such simple cases as this. *Whenever a group of commodities produces in combination a greater satisfaction than results from the consumption of the same commodities separately, the consumption of the group is harmonious consumption, and is most economical.* Finally, (3) we should cultivate *variety* in consumption. The greater the variety of goods consumed, the higher will be the marginal utility of the goods, and hence the keener the satisfaction in their consumption. Moreover, the wider is the range of one's likings, the more certain is one to find satisfaction under widely varying conditions, as when

travelling among strangers. To take a simple instance, a family with little variety of taste or desire in the matter of food is at the mercy of price changes within that limited range of food purchase, while those who have cultivated varied tastes are able to give up the consumption of any one form of food, when it becomes expensive, without great loss of enjoyment. If the American people would cultivate a taste for other kinds of bread than that made from wheat flour, they could get their satisfaction from the other kinds of bread as well as from the wheat bread itself more cheaply than they now do.

(B) **The Economy of Right Use.**—Hitherto, we have been speaking of a lack of economy due to the failure to appropriate objects and services to their most advantageous uses. But even when they are so applied, there is generally some waste in the method of using them. It is even probable that more waste arises in this way than in the other, though the harm to character is, of course, incalculably less.

The Economic Importance of Housekeeping.—It is here that the great influence of the wife and mother can be seen. Probably not less than three-fourths of the income of the average family depends, for the economy of its expenditure, upon the woman to whom the affairs of the household are intrusted. The importance of this consideration has often been overlooked. Americans, in particular, have incurred the reproach of wasteful methods of providing food for the family. Such waste may result (1) from the choice of foods that contain relatively little nutriment; (2) from the choice of foods not well suited to the particular needs of the consumers; (3) from failure to utilize all the material that is purchased and that

would supply nutriment; (4) from bad preparation of the food; (5) from failure to utilize to the full the fuel devoted to cooking. Similar wastes are repeated in the matter of clothing. It has been calculated by careful investigators, that through these channels there is a waste in the ordinary family income of over one-tenth of the total. If the calculation be correct, we may conclude that a stoppage of these wastes would enable the average family to secure the same enjoyments with a working day one hour or more shorter for the workers of the family, or to increase the sum of their enjoyments by more than a tenth without any increase in the amount of work required.

SUMMARY

1. Economy in consumption requires an economical balancing of expenditures between the present and the future, and an economical ordering of present expenditure: the one is the economy of "saving"; the other, the economy of "spending."
2. Saving, unless it is merely hoarding, is really spending for the future. Therefore, a wise balancing of present and future is secured by the mean between prodigality and parsimony. The prodigal is not a public benefactor.
3. Economy in present consumption requires right choices and right uses of the things chosen.
4. Luxury and harmful consumption both violate the rule of right choices. Inclusive, harmonious, and varied consumption is most economical.
5. The economy of right uses depends largely upon the home maker.

QUESTIONS

1. Discuss the fallacy: "Spending money makes trade good." Why and how does the man who saves spend? Through what agency is this spending usually done in modern society?
2. What two general principles must be observed in economizing on present expenditure?

3. What is luxury? What are its economic effects? How does it differ from harmful consumption?
4. Explain by illustrations the economy of variety in consumption. Of harmonious consumption. Of inclusive consumption.

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PART II.—PRODUCTION

CHAPTER I

INTRODUCTORY

Why Production should be studied Next.—We have made human wants, consumption, and demand the first subjects of our study of economic theory because it is from these that all other economic phenomena take their rise. We have seen why men exert themselves in the work of production. The next logical step is to inquire how men go about the work of production. We have studied the cause and the laws of demand. We have next to make a similar inquiry regarding supply. Our present study therefore is of the general subject of production.

What Production Is.—Just as consumption means the destruction, not of matter, but of the particular utilities of certain forms of matter, so *production means the creation, not of matter, but of utilities*. Man cannot create matter. Neither the farmer nor the merchant adds one atom to the existing material of the earth. Yet both are called producers, and properly so. What, then, do they produce? Think about it and you will discover that they are producing quantities of utilities and nothing else. And how do they do so? Simply by putting things in places appropriate to that purpose. “This one opera-

tion," says John Stuart Mill, "of putting things into fit places for being acted upon by their own internal forces, and by those residing in other natural objects, is all that man does or can do with matter."

All Production essentially the Same. — It has seemed to some, even among economists of an earlier time, that the farmer is more truly a producer than the manufacturer, and the manufacturer than the merchant; but careful thought discloses the fallacy of such a view. All industrial classes alike produce one or more of the four sorts of utility which we have described, and they do so by changing the relations of things in time or space. The farmer changes the position of grains of corn by dropping them into the earth. Then he removes weeds and throws earth about the rising stalks. Thus man's acts in changing the relations and position of things, aided by nature's materials and forces, result in more corn for human consumption. The manufacturer in the same way changes the position of pieces of matter, and, aided by natural forces within and without the object of production, he causes matter to assume a form which fits it, or better fits it, for human needs. So, too, the merchant changes the places of things from where they are less useful to where they are more useful, or holds them in one place until a change of external circumstances gives them a greater time utility. He is producing utilities as truly as is the farmer or the manufacturer. Of course it is possible that the utilities actually produced by merchants could be produced with a smaller expenditure of economic force than they are at present, and that saving could be effected by a better organization of the work of production. Again, it may be that the merchant may now and then secure a larger

return for the production of a given quantity of social utility than does the farmer. But all this affords no justification for the popular impression that his work is really less productive in its nature than is that of any other industrial class. The only difference is in the kind of utility that the different classes are engaged in producing. Finally, it must be remembered that in the same way the physician, the teacher, and all others who are engaged in rendering personal services, are creating utilities, and are therefore producers.

Production, then, we may define as *the creation of utilities by the application of man's mental and physical powers to the physical universe, which furnishes materials and forces. This application of man's powers we call labor.*

We have already defined goods and economic goods. It remains for us here to call attention to the fact that those quantities of utility which result from labor are economic goods, but that not all economic goods are to the same extent the result of labor. One may pick up a diamond or a nugget of gold upon which one has stumbled: in such a case it can hardly be said that the economic good is the result of labor at all. But even in such rare cases it must be remembered that while the one diamond or the one nugget may have required no labor in getting, yet the whole stock of such goods is the result of toil and suffering and privation for which the value of our diamonds and gold, it is frequently said, does not represent anything like a proper recompense.

There is one clearly marked case of *value creation* which is not *wealth production*. The land on which New York and Chicago stand could have been purchased only a few centuries ago for a very small sum of money. The great

value which that land now has is to a considerable degree the result of human labor, but much of it is due to the great increase in population, which of itself represents no idea of labor. Such value is a product of social aggregation, not of individual effort. The question of the expediency of allowing individuals to appropriate these individually *unearned increments* of value will be discussed later. Here it concerns us only to notice that such unearned increments exist; in other words, that there is such a thing in the world as value creation which is not at the same time wealth production.

Individual and Social Wealth. — This distinction between the individual and the social standpoint runs all the way through economics, and it is particularly important in the case of the conception of wealth or economic goods. What is wealth to the individual may not be wealth to society, and, on the other hand, what is wealth to society may not be within the ownership of an individual. Thus a mortgage is wealth to the individual who holds it, but it is not a part of social wealth, since if the claim for which it stands is extinguished, society is neither richer nor poorer. The case is the same with bonds issued by a city, a state, or a nation.

Productive Elements often Overlooked. — There are many important facts regarding production which are often overlooked. Thus we are likely to forget that even to-day a large part of production is household production, and is not designed for the market place at all. The labor of at least half the women of the country is expended in producing material good things for the use of producers.

Again, we are likely to overlook the fact that in the country, where over one-half of the population of the

United States lives and works, there is annually produced a vast amount of goods which are destined not for the market but for home consumption. Vegetables, small fruits,—cultivated and wild,—butter, eggs, meat, fish caught in public waters, and game are some of the things that occur most readily to the mind.

Considerations of this character show the great need of caution in attempting to compare the annual production of one country with that of another, or to compare the annual production of the same country at different periods. Household production is becoming relatively less important, while the production of things for the market, the value of which is readily measured in money, is constantly gaining in importance. Hence, apparent annual production—the production of things which have a market price set upon them—is increasing more rapidly than is the real annual production. The result is a tendency to overestimate our progress and even to count as progress what may not be progress at all. Thus, should boarding-house and hotel life displace private housekeeping, annual production might appear to increase as a result of the change, though the real wealth and income of the country would evidently be affected in no such degree.

Still further care must be exercised in studying census estimates of wealth. These estimates are ordinarily made in terms of money. Now if commodities are very abundant, their price, other things being equal, will be low, though the real wealth of the country is great. If, for instance, the quantity of cotton cloth produced doubles between two census periods, while the price falls one-half, the total value of the product will appear in the census estimates as equal in the two cases, though it is evident

that society in the second period has twice the amount of this valuable commodity.

Over-production and Under-consumption. — It is not uncommon to find men expressing a belief in the possibility of general over-production. Still more common is it for men to hold views which could only be correct if general over-production were a possibility. Even some economists a century ago fell into the same error. *By general over-production is meant a production of commodities in general beyond the needs of society.* Careful thought will show at once the absurdity of such an idea. The purpose of production, as we have seen, is consumption. Manifestly, there has never been a time when more economic goods were produced than men really needed to satisfy their legitimate wants. On the contrary, there has never been enough produced for this purpose. Sometimes, indeed, production moves forward unevenly, and an undue amount of labor and capital are for a time devoted to producing particular commodities; but until all men are well fed, well clothed, and well housed, and furnished with material appliances for their higher life, such as books and pictures, it will be a manifest absurdity to talk about general over-production as a possibility. When there is an almost universal difficulty in disposing of goods, the chief cause is not over-production but under-consumption. Men want the goods, but they cannot at the time dispose of their services, and consequently lack the purchasing power that would enable them to satisfy their wants. When any class of goods is produced in such quantities that the price falls below the cost, we may say that there is over-production of these goods. Such over-production is not uncommon. It is one of the

unpleasant features of our complex organization of economic society that its parts do not always work together harmoniously. Producers are more and more separated in time and space from those who are to consume their products. It follows that only the shrewdest producers can calculate with any approach to accuracy how intense will be the wants for their goods, and in what quantities rival producers will furnish goods to the market. Mistakes in judgment result in over-production in particular industries, and over-production in a few industries often leads to the spread of doubt and uncertainty throughout the business world. Then men in their fear restrict production and thus incidentally close the market for labor. Laborers seeking and failing to find regular employment lose their purchasing power, with the result that the under-consumption spreads all along the line, and society passes through what is called an industrial crisis or panic. Such crises were startlingly regular during the nineteenth century, the greater ones coming at intervals of about twenty years, with minor ones in the alternating ten-year intervals.

The explanation of crises here given is the one usually accepted by economists, but there are two other explanations that should be mentioned. Some writers regard the unequal distribution of wealth as the fundamental cause. If wages do not rise in proportion to the general increase in wealth, it is argued, the mass of the consumers, who are wage-earners, will lack the means to purchase the goods produced. Again, other writers emphasize the monetary aspects of crisis. The crisis of 1893, for example, is by some regarded largely as a monetary disturbance.

Production and Sacrifice. — Consumption regularly affords satisfaction. Production as regularly requires

sacrifice and exertion. We should recall here, what we have already noted in studying consumption, that the balancing of the satisfaction of wants derived from consumption against the exertion and sacrifice required by production lies at the very centre of all economic thought. It is true that much labor seems in itself so pleasurable that it affords its own satisfaction. But if such labor is not sufficient to produce the goods that society demands, other labor which does not contain its own reward must be applied to production, and the same reward will be paid by society for all labor applied to that end. In most cases, however, it will be found on investigation, the pleasure comes rather from the actual or anticipated result of the labor rather than from the labor itself. Again, when we consume to-day less than we have means to consume, with the object of greater production in future time, we are aiding in production by abstinence from a possible pleasure. True, in such cases we hope to get in the future a satisfaction that will outweigh the present unsatisfied feeling, but the unsatisfied feeling is present with us and must be endured if we are to contribute to production.

The Production of Goods and Services.—In what follows we shall treat the production of material goods and services together, since there is little essential difference between the two forms of production. It is worth noting, however, that the proportion of human effort devoted to the production of commodities and services respectively varies with the progress of civilization. In early stages, when only the most pressing wants are either felt or satisfied, men perform for themselves such simple services as are required. It is only later that there arises a want for such personal services as call for special training. The social order gradually increases in complexity,

and as a result of new wants and increased means of satisfying them, division of labor among men makes a place for the singer and poet, the physician and priest, and for other classes who are engaged in producing personal services. As the production of material goods becomes better organized, requiring less proportionate human effort, greater numbers of people will find it profitable to specialize their training and effort toward rendering personal service of one sort or another to society.

SUMMARY

1. Production means the creation, not of things, but of utilities, by the application of man's powers to the physical universe. This application of man's power is labor.
2. Individual wealth is not always social wealth.
3. Many productive elements, such as woman's work in the household, and the gathering of natural products for home use, are often overlooked.
4. There can be no general over-production. What is thought of when that expression is used should rather be called under-consumption.
5. With advancing civilization, an increasing proportion of human energy is devoted to rendering specialized personal services.

QUESTIONS

1. Define production. Compare the definition of consumption with that of production.
2. Why and how is the physician a producer? The teacher? The actor?
3. Mention instances of individual wealth. Of social wealth. Do all your examples belong to both classes?
4. As cities increase in size, the value of street railway franchises regularly increases. Is this value a result of production? Explain.
5. What utilities are produced and consumed in your home which do not have a money value put upon them?
6. Germany owns her railways. How would this fact bear upon census estimates of the wealth of the German people as com-

- pared with similar estimates of the wealth of the people of the United States?
7. What is meant by the expression "over-production"? Is such a thing possible? What is it that is commonly mistaken for general over-production?
 8. Show by a detailed explanation how it is that more men are engaged in rendering personal services than was the case in earlier days.

LITERATURE

For a general discussion of the subject of production, consult any standard work on Economics. A considerable number of these are given in the Appendix. Also:—

Marshall, A.: *Principles of Economics*, Bk. II, Ch. II, §§ 1 and 2.

Mayo-Smith, R.: *Statistics and Economics*, Chs. III, IV, and V.

Mill, J. S.: *Principles of Political Economy*, Bk. I, Ch. I, §§ 1 and 2.

CHAPTER II

THE FACTORS OF PRODUCTION

The Three Factors. — Three things contribute to production as it is carried on to-day. They are therefore called the factors of production. Of these, two are called *original* or *primary* factors, because they exist in the very earliest forms of production, and because it is from them that the third factor is derived. These two factors are land, or nature, and labor. Of these, in turn, we may notice that one is *passive*, while the other is *active*. In other words, it is primarily labor, acting upon nature, that produces wealth. From this action of labor upon nature, followed by postponement of the enjoyment of the result of the labor, comes capital, which we therefore call a *secondary* or *derived* factor. That is, it is secondary to nature and labor, and is derived from them.

NATURE OR LAND

Meaning of the Term. — Under the term "nature" we here include all the material things furnished directly by her hand, together with all the natural forces used in production,—the power of the wind, the movement of water, gravitation, cohesion, etc. Some of these materials and forces are furnished in unlimited quantities, and are therefore free goods. It is common in economics to use the word "land" instead of "nature," because of all the gifts of nature it is land with which we have chiefly to do in

our science. But it must be remembered that the word "land" in this use has the very broad meaning which we have here given it. To avoid any possibility of confusion some economists have used the term "natural agents," when the broader meaning is intended.

What Land does for Production. — By analysis we learn that the service of land to production is not a single or a simple thing, but that it usually renders three distinct services. *In the first place* (1) it furnishes *standing room, or situs*. It gives men something upon which they may rest and move about while conducting productive processes. Moreover, it enables them to utilize the natural forces which go with the land itself. Mere space is often a source of great value, as can be seen in the case of city real estate. As a continually increasing proportion of a growing population dwells in cities, this first service rendered by land is becoming more important. *In the second place*, (2) land contains those elements needed by plant life, and thus renders a service to agriculture. We call this property of the land its "fertility." *Finally*, (3) land contains natural products below its surface, such as coal, gas, petroleum, iron, silver, and gold. Man does not create these *natural treasures* nor give direction to nature in their formation. Some nations have deemed it unfair that they should become the property of individuals, and have therefore treated them as a common heritage, exacting a rent or royalty for the opportunity to exploit them. This is perhaps generally the case to-day on the continent of Europe; but English law, with its inclination to the exaggeration of private rights, has long established the principle that he who owns the surface owns downward to the centre of the earth and upward to the sky.

The Law of Diminishing Returns from Natural Agents. — One of the most fundamental and far-reaching laws in economics is that which describes the result of investing labor and capital upon land or other natural agents. This law, known as *the law of diminishing returns*, will repay careful thought and study.

Every farmer is naturally desirous of reaping the largest possible return from his expenditure of labor and capital upon his land. Yet this very statement implies that there is a limit beyond which further expenditure will be unprofitable. Let us see why this limit exists, and how it is determined. Suppose the case of an acre of land which a farmer intends to "put into" potatoes. The field would yield some crop even if it were hurriedly and poorly ploughed, if no fertilizer were used, and no care were taken to prevent the growing vines from destruction. Yet the farmer knows that further expenditure of labor and capital will result in a much larger crop, and that, if prices are good, the increased crop will fully repay the increased outlay. If we were to inquire more particularly from the farmer as to his opinion regarding the possibilities, we should get from him something like the following estimate : —

An invest- ment of	would give a total return of	or an average per dollar invested of
\$ 5	40 bushels	8 bushels
10	100 "	10 "
15	165 "	11 "
20	200 "	10 "
25	225 "	9 "
30	240 "	8 "
35	245 "	7 "

and so on. Now an examination of these figures will show that a doubling of the expenditure from \$5 to \$10 results in more than a doubling of the product, and that similarly the increase in the product is more than proportionate to the increase in expenditure in the case following. So, too, there is an increase in the product in each of the other cases given; but notice that when the expenditure is increased from \$15 to \$20, an increase of one-third, the increase in the product is only from 165 bushels to 200 bushels, an increase of only a little more than one-fifth, and that in the same way in the following case, increasing the expenditure by one-fourth results in an increase of product of only one-eighth, and so on. In other words, up to a certain point an increase of expenditure results in a proportionate or more than proportionate increase in return, while after that point has been reached, further increase in expenditure results in less than a proportionate increase in the return. If it were not for this fact, there would be no limit to the amount of labor and capital which the farmer could profitably employ in the cultivation of the acre of land. And the fact that farmers are everywhere strictly limited as to the amount of such profitable expenditure is complete proof that such a point of diminishing returns exists in the application of labor and capital to natural agents.

It will appear on reflection that the farmer will not necessarily discontinue his expenditure upon the land at the point at which the product begins relatively to diminish. The limit of profitable expenditure will depend upon the price of the product, which of course cannot be exactly known at the time of planting. Thus at a price of ten cents a bushel, the farmer would lose absolutely in all

except the second, third, and fourth cases in our illustration, and he would make a surplus only in the third case. At a price of nine cents a bushel, he could not afford to raise the crop at all. On the other hand, at a price of fifty cents a bushel, he could afford to expend \$30 upon the acre, since the last \$5 of expenditure would yield a return of fifteen bushels, worth \$7.50, or \$2.50 more than the amount expended in labor and capital. At a still higher price he could afford possibly to expend more labor and capital in the cultivation, the amount depending upon the rapidity with which the proportionate return of the product decreased beyond the point covered by our illustration. Indeed, in the cases assumed there are only two possible prices, ten and eleven cents, at which the point of diminishing returns would correspond with the point at which profitable expenditure would cease. We may, therefore, say that there are two ways in which returns diminish as expenditure increases: there is a diminishing return from the point of view of the product, and there is a diminishing return also from the point of view of the value of the product. The second is of course decisive with the farmer, *but this itself is due to the diminishing return measured in terms of the product.*

A further point remains to be particularly noted. An imperfect understanding of the nature of the law has led at times to the conclusion that as population increases it becomes increasingly harder to secure the means of subsistence from the soil. But this conclusion is at variance not only with the known facts of the history of society, but also with the law itself when the law is properly stated. It would be a valid conclusion if the point of diminishing returns remained everywhere at the same

point from year to year and from generation to generation. But we all know how far from the truth this last assumption is. The art of agriculture is constantly improving as a result of invention and the discovery of better methods and processes, and every improvement makes it possible to secure a greater crop without a greater expenditure; in other words, *every such improvement pushes forward the point of diminishing returns.* The law of diminishing returns still holds true. There is still a point beyond which further investment of labor and capital upon an acre of land will yield a less than proportionate return, but that point is not now reached so soon as before.

We are now ready for a formal statement of the law which we have been discussing. *At any given time, there is a point in the investment of labor and capital upon natural agents beyond which further investment yields a less than proportionate return.*

We have taken for our illustration the case of labor and capital expended in agriculture. But the law is equally true of the expenditure of labor and capital upon land or other natural agents in the case of mining, manufacturing, and commerce. The only difference is that in these industries greater amounts of labor and capital may be expended upon a given unit of land,—say an acre,—before the point of diminishing is reached, than is the case in agriculture.

It is possible to look upon the law of diminishing returns from other points of view than the one here taken. For example, instead of taking an acre of land as a unit and supposing successive amounts of labor and capital to be added to it, we might have considered the farmer himself as the unit, giving

him successive amounts of land, labor, and capital to manage. In this case we should also have found at first an increasing and then a diminishing return. As still other points of view are possible, it is important to adhere to one standpoint in comparing different lines of industry.

LABOR

Definition. — The second of the primary or original factors in production is labor. *Labor is human exertion of mind or body undergone with the object of creating utilities.*

A common classification distinguishes mental from physical labor. In making this distinction it is important to bear in mind that from the purest instance of mental labor to the purest instance of physical labor there is always some mixing of both forms. The philosopher must labor with hand or tongue if he would give the results of his thought to the world, and, on the other hand, even the ditch digger can by no means do his work without the exercise of intelligence.

We must never forget that labor is not an end in itself, but is only a means to an end, the satisfaction of wants. With this thought firmly fixed in mind, it will not be difficult to understand that increase of labor, unless it means increase of human satisfactions, is not socially desirable. Breaking window panes makes a chance for labor, but it does not increase human satisfactions as a result of that labor. On the other hand, labor-saving devices, while they may injure individual laborers, are beneficial to society as a whole, since they enable it to secure greater satisfactions by the same exertion.

The Supply of Labor. — A question of prime importance in connection with labor is that of the conditions affecting

its supply. What is the supply of labor? Evidently it is not mere numbers, since a hundred laborers in one country often furnish much more labor to production than do a hundred laborers in another. Analysis of the subject shows that the two main elements determining supply are (I) *efficiency* and (II) *quantity*. The efficiency of labor depends in turn first of all upon (1) *the efficiency of the laborers themselves* — upon their characteristics, mental, physical, and moral. Temperance, trustworthiness, skill, alertness, quick perception, comprehensive mental grasp; — all these good qualities minister to the efficiency of laborers, and hence of labor. In the formation of these qualities the physical and social environment in which the laborers are reared and do their work are of the greatest importance.

(2) The second influence conditioning the efficiency of labor is *the manner in which it is organized and directed*. As we are to discuss this separately and at some length, we need note here only that when labor is carefully organized and directed, so that each laborer can do continuously the work for which he is best fitted, the labor by that means becomes indefinitely more efficient.

(II) The second element in the supply of labor is its amount or quantity. This again depends partly (1) upon the *aggregate number of hours* during which laborers work, varying with the length of the working day, the number of holidays in the year, etc. A ten-hour working day means a greater quantity of labor than an eight-hour day, and therefore a greater supply of labor, provided the efficiency is not proportionately impaired by the long hours of work.

The Growth of Population. — The supply of labor un-

doubtedly increases, other things being equal, (2) with *the growth of population*, which means a possible increase in the number of laborers. Now, to the growth of population there is no absolute limit save in the means of subsistence which can be secured. Throughout recorded history we again and again find the population of one country and another increasing to the starvation point; *i.e.*, increasing until the means of subsistence were less than sufficient for all who had been born. From this fact has arisen a fear lest this over-population shall always repeat itself in the future as it has in the past. Those who are much moved by such a fear have often on their lips the theory of an English economist, Malthus, called from his name, Malthusianism. According to this theory, population, when not checked, *tends* to increase in geometrical progression, while the best that we can hope for in the case of food is that it may increase in arithmetical progression. Consequently, if there were no other checks upon the increase of population, men would soon reach the point of starvation. It is admitted by the theory that such checks exist. These are of two kinds, *positive* and *preventive*. Positive checks are those which act through the death of the living — checks which increase the death-rate, such as plagues, pestilence, intemperance, infanticide, cannibalism, and war. Preventive checks are those which act through a lowering of the birth-rate. These are in the main checks of a moral character, including what Malthus called *prudential restraint*, — consisting in the postponement or avoidance of marriage, or of the upbringing of a family. Conscientious men will be slow to marry unless they can support a wife and rear their children worthily. As population becomes denser, such men

find the burden of rearing a family heavier, and therefore postpone marriage or avoid it altogether. With every increase of the average age at marriage, the number of children born decreases more than in the same proportion. Innumerable customs exist all over the world which have grown up from the social need of checking marriage and population, as, for instance, the custom which obtains in some peasant communities of marrying only when a cottage becomes vacant by the death of its former occupant. Malthus himself formally deduced only this lesson : let no man marry until he has a reasonable prospect that he will be able to support a family of the average size. He wished to intensify in Englishmen the feeling of parental responsibility. But Malthus himself often forgot the hope contained in man's gradual enlightenment, and took a gloomy view of the future. Others, following Malthus in his gloomy reasoning, have thought that there is no escape for the race from repeated over-population with all its resulting vice and misery. Modern civilization, however, gives much cause for hope that as prosperity becomes diffused among the people, the problem of over-population may lose its serious aspect. Statistics show conclusively that everywhere advancing civilization has been accompanied by a decline in the birth-rate. At the present time, nothing more in the way of restraint upon population seems necessary in the United States than to keep from our shores the lowest classes of foreigners and to exercise in contracting marriage that prudence which has long characterized the really best classes of American society.

Population and the Standard of Living. — In another place we shall study at some length the influence exerted

upon population by the *standard of living*, — the amount of necessities, comforts, and conveniences which people are accustomed to enjoy. Here we may just pause to note that where the standard of living is a high one and is firmly maintained, anything that threatens it will set in operation the preventive checks to which we have referred. But the standard of living is not absolutely fixed, and changes in population through the action of preventive checks come about only slowly. It may therefore happen that when the standard is assailed by continued national adversity, the rising generation may be brought up to accept a lower standard, according to which a greater increase of population will be possible and natural.

The Two Sources of Increased Population.— The population of any country, as distinguished from the whole world, has two sources of growth, — *natural increase* and *immigration*. Natural increase comes about in any country through a *continued excess of births over deaths*; in other words, through having a birth-rate which on the average exceeds the death-rate. Such an excess, however, may result from any one of several widely differing conditions. Thus some countries, *e.g.*, Russia, have a very high death-rate with a still higher birth-rate, while in other countries, *e.g.*, England, the increase results from an excess of a low birth-rate over a still lower death-rate. It is evident that the proportion of persons capable of labor, *i.e.*, the supply of labor, will be greater where the death-rate is low. Manifestly, too, it makes a great difference in the real happiness of a country whether the increase in population is due to the one condition or the other. In our own country population has increased with wonderful rapidity for

over a century both through immigration and natural growth. Immigration on a vast scale has continued down to the present day, when it is greater than ever before; and though the birth-rate has been gradually falling, the death-rate has fallen almost as steadily, with the result that natural increase of the population has been uninterrupted.

CAPITAL

Definition. — The third factor in production, the secondary or derived one, is capital. Much as hydrogen and oxygen produce water, land and labor produce capital. Itself neither land nor labor, capital is derived from the two, and is a new thing with properties of its own. In everyday speech the word "capital" is often used loosely to describe things which are technically not capital at all. Thus the word is often used to include land, because, in many respects, to the man engaged in a business enterprise there is little difference between his land and his machinery. Yet technically the two should be sharply distinguished. Again, business ability is often described as personal capital, and there is a certain sense in which this figurative expression has a value ; but it should always be remembered that such language is only figurative. Land is nature ; capital is a human product. Labor is indissolubly connected with the personality of the laborer ; capital is a material thing resulting from that labor. Capital as a factor of production, then, may be defined as consisting of *those intermediate products which are used for the purpose of further production*.

The Function of Capital. — Capital is "the medium through which the two original productive powers exert

their instrumentality." It includes not only all the man-made aids to production, such as buildings, machinery, and tools, but also all those unfinished goods, such as hides and bar iron, which enter into further production. These partly manufactured materials are technically spoken of as in the "process of ripening." They are to be distinguished from goods which have passed through the final stage of production, and are in the hands of consumers. Such goods are no longer capital, although from their wise use new capital may result.

The function of capital may be expressed as follows: *It enables men to utilize more completely nature's materials and forces by the substitution of roundabout methods of production for direct ones; and it accomplishes this result by furnishing the tools for such roundabout methods, and by making possible a longer interval between the initial effort and the final effect, or consumption.* Roundabout methods are almost without exception more efficient than direct ones, but these methods require tools or machinery and a lengthened period of production. Thus, a man may lift a heavier weight by the roundabout method of using a lever, instead of relying upon his unaided strength, since in this way he summons nature's forces to his aid. And every improvement in machinery means a more roundabout method of applying labor. Capitalistic production, therefore, as it develops, shows a continual increase in the number of steps between the initial movement and the final product, and, as a general rule, an increase in the length of the interval.¹

¹ The teacher must remember that it is impossible in an elementary treatise to enter into detailed explanations and qualifications of every statement and principle. The authors leave large latitude to him in this

The Origin of Capital. — It is often said that capital is the result of saving, but such a statement of the case is at least misleading. Saving, as such, is a merely negative act and cannot produce a positive result. In order that we may save, we must first have something to save, — that is, we must produce, — and, moreover, we must produce something more than is sufficient for existence; in other words, we must have a surplus. If such a produced surplus is laid by or saved, it *may become* capital.

Methods of Capital Formation. — Such savings do become capital when they are devoted, directly or indirectly, to furthering production. One of the simplest ways in which saved surplus may be transformed into capital would be illustrated by the case of a fisherman who should use part of the catch of one period to subsist him while in a later period he worked at a canoe, or net, or other device for increasing the product of his future labor. In advanced communities the process is usually much more complex. The farmer, for instance, who wishes a self-binder, pays for it directly with money. But the money has been received in return for a saved surplus of his farm products. Meanwhile, those who have been working on the manifold processes which result in the finished farm machine, have been subsisted out of a surplus which has been advanced to them. The case is the same with the manufacturer.

direction. Improvements sometimes seem to shorten processes, but when we go far enough back in our studies, we shall find that the rule given above is correct as a general principle and calls attention to one of the most remarkable and significant principles of capitalistic production. A threshing machine threshes grain rapidly, but to apply the above principle aright, we have to think of all the steps involved in the production of the machine and the length of the process. The roundabout methods, of course, are not an end but a means to an end.

He may sell his products and consume at once the resulting means, or he may consume less than all, and with his remaining means may purchase from others the forms of capital of which he stands in need. Or, having all the machinery needed, he may invest his surplus in the stock of some company, in which case the company will use it for the purchase of needed capital. In all of these cases the use of money obscures the nature of the transaction, which is at bottom only the turning of labor from the production of finished consumption goods to the production of capital goods.

Results of the Use of Capital. — It remains for us to say a few words regarding the results of the use of capital. First of all, (1) capital makes possible an increased amount of product. Things that could be produced by hand and without capital can be produced in much greater quantities when capital is present. In the second place, (2) capital makes possible certain utilities which we could not enjoy at all without it. Thus, the enjoyment of oysters and shell-fish at great distances from the coast would be impossible without the capital engaged in transportation. Finally, (3) capital makes possible in many cases a higher quality of product than could exist in its absence.

Representative Goods. — One class of goods, if they may be so called, must be especially distinguished from capital in the technical sense of the word. We refer to what are known as "representative" goods, which are not, strictly speaking, goods at all, but only signs of the ownership of goods. Notes, mortgages, bonds, and stock certificates are not goods; they simply represent ownership. Neither are franchises a part of social capital. When a city grants to a company a franchise for the construction and opera-

tion of a street railway, it does not thereby directly create new capital. It merely grants permission to the company to make use of existing social capital or to create social capital.

Fixed and Circulating Capital. — It has been common among economists to classify capital as *fixed* and *circulating*. Circulating capital is *that which can be used but once, or in one round of operations*. Its entire value passes over into the value of the finished product. Fixed capital, on the other hand, is capital which *lasts through a succession of operations, only a part of its value passing over into the product with each use*. Thus, the raw materials and the partly finished goods used in manufacturing are examples of circulating capital, while the factory building and the machinery are fixed capital.

Free and Specialized Capital. — A somewhat similar classification is that of *free* and *specialized* capital. Even more than is commonly the case with such classifications, these words must be understood as pointing only to relative ideas. Specialized capital is that which by its form or circumstances *can be used for only one productive process, or at most for a very limited number of such processes*. Free capital, on the other hand, is capital which *can be applied to any one of a considerable number of productive operations*. Thus coal, iron, and leather are relatively free forms of capital, while railways, canals, and many forms of machinery are relatively specialized. The practical importance of the difference lies in the fact that free forms of capital can more readily adjust themselves to changes in the social demand for goods. Thus, if too great an amount of a nation's capital is converted into fixed and specialized forms, — into railways, for example,

—the mistake is not easily or quickly corrected, and the entire production of the country must suffer in consequence of the bad adjustment. Such disproportionate investment of capital in fixed and specialized forms is believed by many economists to be the most important single cause of industrial crises.

SUMMARY

1. Of the three factors of production, land and labor are primary and original, while capital is secondary and derived.
2. Land furnishes "standing room," fertility, and natural treasures.
3. Labor means human exertion of mind or body undergone with the object of creating utilities.
4. The efficiency of labor depends upon the efficiency of the individual laborers, and upon the efficiency of their organization.
5. Capital consists of intermediate products used for further production.
6. The formation of capital involves saving or "abstinence."

QUESTIONS

1. Mention some of the checks upon population. How does the standard of life affect the increase of population?
2. Why should land be distinguished from capital? To which class do the buildings upon land belong? The fertilizer that was used five years ago?
3. What advantages flow from roundabout processes of production? Mention some of the steps in the development of indirect processes in the production of wheat.
4. Distinguish between free and specialized capital; between fixed and circulating capital. What are representative goods?

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CHAPTER III

THE ORGANIZATION OF PRODUCTION

IN the preceding chapter we have considered the factors of production separately, studying the nature of each, and the principles governing its efficiency and increase. We have now to study the manifold ways in which production in our day has come to be socialized and organized. It is as though we had studied the nature of the various parts of a machine, and were then to study further the different ways and methods of putting the parts together, and to learn how these acted as a unit when the whole machine was "set up."

I. ORGANIZATION OF THE FACTORS REGARDED COLLECTIVELY

Early Simplicity. — We have already seen that the three main parts of the great machine of production are land, labor, and capital; and we may therefore first of all inquire how these parts are "assembled" for efficient work. In other words, the first problem in our present study is that of the coöperation or organization of the factors of production taken together or collectively. This organization, in the early stages of social development, was exceedingly simple. The old household economy was so organized that it is scarcely possible to distinguish in it the three separate factors. The same man owned the land, the

labor, and the capital, and as sole judge of what was right distributed the total product among those who aided in production. When, with advancing civilization, production came to be carried on by village communities, there was collective ownership of the instruments of production and management by a common authority, and the distribution of the product was regulated by custom. Later, under the gild organization of industry and commerce, there was a similar lack of sharp separation of the factors. The gild of the Middle Ages embraced apprentice, journeyman, and master, and regulated industry and commerce under governmental supervision. The master directed the business, owned the capital, and worked with his own hands. He received the entire product of the business after supporting the apprentice and paying the journeyman. Labor was in a certain degree set off from the other factors, but the separation was by no means complete. The man who at any time supplied labor looked forward not without reason to the time when he himself in turn should become capitalist, employer, and manager, for such advance was a regular part of the gild system.

Growth of Complexity. — As has been explained in earlier chapters, the last one hundred and fifty years have witnessed a great change in the organization of the productive factors. Here and there still survive traces of the earlier simplicity, and one great branch of production, agriculture, is still generally carried on in our country without a separation of the factors. A large proportion of our small farmers own the land they cultivate and the capital they employ, and depend wholly or in great part upon their own labor and that of their families for their product. But in commerce, manufacturing, and transpor-

tation, we have as a rule to-day one large class furnishing labor only, another class furnishing capital and sometimes land, and a third class organizing and managing business. A modern railway corporation serves as a good illustration of this. The holders of the bonds—and in some cases the stocks—furnish the capital, and receive in return interest or, in the case of the stocks, dividends. Labor, supplied by others, is paid for by wages and salaries. The land is also regularly supplied by the bondholders, being acquired by the exchange of a part of their capital. Consequently, we have rent also, though this does not usually appear as a separate item in railway bookkeeping, except in those cases where the land has been leased instead of being purchased outright. Finally, the managers and directors of the business, chosen by the stockholders from their own number or from without, constitute a separate class in the organization.

The Entrepreneur. — It is easy to see that when business organization has grown so complex, some central guiding intelligence is necessary, which shall overlook the whole field, and, after deciding what things shall be produced, and in what quantities, shall provide that the necessary factors of production work together in creating the product. The man who does this usually assumes the risk of loss or failure, and, on the other hand, pays a stipulated sum to those persons or classes who supply him with the factors of production.

In the England of the eighteenth century such a man was called an “undertaker” or “adventurer.” As the word “undertaker” has since come to be applied to one small and special class of business men, and as the word “adventurer” now carries with it an idea of rashness or even dishonesty,

the French word "entrepreneur," an exact equivalent of the word "undertaker," is now regularly used instead.

The function of the entrepreneur has become of the utmost importance in modern society, and seems to be growing in importance with every increase in the complexity of industrial organization. He has been well called the "Captain of Industry," since it is he who marshals and commands the industrial forces, and more than any one else bears the responsibility for failure or success. Business enterprises under able leaders achieve brilliant successes only to languish and become bankrupt when death removes the guiding hand and brain. Such was the case with the great mercantile business which was built up in New York City by A. T. Stewart. Whole towns in many cases depend for their prosperity upon a few shrewd Captains of Industry.

The Forms of Business Undertaking. — The entrepreneurship of a business is not always undertaken by a single individual. On the contrary, a rapidly increasing volume of business is coming to be carried on in forms which call for a division of the function or functions of the entrepreneur among many individuals. The following are among the main forms of business undertaking in the modern world :—

1. *The Single Entrepreneur System.* — In this form of business, a single individual owns or hires the capital and land, employs the labor, directs the business, and bears the whole risk.

2. *Partnership.* — In the case of a partnership, the ownership, direction, and responsibility are shared, sometimes in unequal proportions, by the two or more partners, who are severally liable at law to the full extent of their fortunes.

3. *Business Corporations.* — This form differs from the foregoing chiefly in the fact that the individual responsibility of the members of the corporation is limited by the charter or by the statutes governing such companies, and in the further fact that there is no necessary legal limit to the life of such corporations. On account of the magnitude of business transacted under this form, it often happens that the functions of entrepreneurship are divided, the shareholders owning, controlling, and bearing the risk, but committing the active management to elected directors, and, through the directors, to hired superintendents and managers.

4. *Coöperative Businesses.* — In what is technically known as coöperative production, the workmen combine, in the form of a partnership or corporation, in the ownership or control of the other factors of production, share all risks, and secure direction of the business either through their own members, chosen for the task, or through regular salaried managers. The great weakness of the system has thus far been that the coöperating workmen have too frequently underestimated the importance of efficient direction.

5. *Government Enterprise.* — The Federal, state, and local governments severally own and manage many businesses of great importance. In these instances the people as a whole own the business and bear all risks, while they commit the direction to elected or appointed managers.

II. THE ORGANIZATION OF THE FACTOR LABOR

In studying the forms of business undertaking, we have really been studying the different ways in which society secures coöperation and organization of the factors of pro-

duction as a whole. We have now to study the ways in which the factors, considered separately, are organized for increased efficiency. And first as to labor.

If it were possible to conceive of a people among whom every individual produced for himself all that he used, exchanging products with no one, we should have an example of *isolated* or *unorganized* labor and unorganized production. But there is no evidence that such an extreme state of things ever obtained anywhere. Wherever we find men gathered together, we find some *socialization*, some organization of their efforts to secure a living, some organization of labor.

Forms of Organization. — 1. *Simple Associated Effort.* One of the earliest forms of organization to be developed among men, and one that still plays a considerable part in the economy of the world, is that which has been named *simple associated effort*. When a group of men unite their efforts in raising a heavy weight, or two men beat together a heated iron or work a saw, we have illustrated this simple form of organization. Sometimes, as in the first of these cases, the combination is to effect a result which could not be accomplished at all by the single individual. Always the combination results in a greater accomplishment than would flow from the sum of the efforts of the several individuals.

2. *Division of Occupations.* — With advancing civilization, industry as a whole has been more and more broken up into parts, and the parts have, therefore, constantly been growing smaller. One of the earliest steps in the organization of labor, perhaps even earlier than that which we have described above, was taken when the members of primitive society began to specialize in their work. And

the whole story of society since, not only in its economic phase, but in all its other phases as well, has been one of increasing specialization of work or function. With division and subdivision constantly taking place, it is clearly impossible to recognize or name all of the stages of progress. But two of these stages are recognized in popular speech as of distinct character. The first of these is what we may call *division of occupations*. Probably the most primitive form of such division was that by which among savages the men took upon themselves the functions of warriors and hunters, putting upon the women the tasks of the household and the field. Division of occupations is indicated by the names of the manifold trades or callings.

3. *Division of Labor.*—The further subdivision of existing occupations has been the work of the last few centuries, and especially of the eighteenth and nineteenth. To this further subdivision — this further organization — of labor has been given the technical name *division of labor*, although, as we have seen, division of occupations is but an earlier division of labor on larger lines. This form of organization is of such prime importance in modern industry that it calls for detailed and careful study.

In our discussion of labor as a factor of production, it was pointed out that the efficiency of labor is in great measure conditioned by the efficiency of its organization. Such efficiency of organization is secured in the highest degree through division of labor. Division of labor — as well as division of occupations — might perhaps with equal propriety be called coöperation of labor. Productive processes, especially in manufacturing, are to-day divided into minute parts, one part or perhaps two or three very small parts being given to each laborer, or to

each group of laborers. Thus, in a modern watch factory, one workman makes one small part of a watch, another a second, and so on. So many are the divisions of the process of watchmaking that no fewer than 300 workmen are required to organize efficiently such an establishment. In the same way, instead of one man performing all the operations in the making of a boot, as was once the rule, we have to-day a front cutter, back cutter, back-stay cutter, top cutter, facing cutter, lining cutter, sorter and buncher, size and case marker, stay skiver, top skiver, crimper, front trimmer, top-front stitcher, top-back stitcher, and so on to as many as 113. But while the workmen divide the processes among themselves, they unite in producing the completed article, and hence we may say that division of labor implies coöperation of labor. When we use the phrase "division of labor," we are looking at one side of the process; while, when we speak of coöperation of labor, we are viewing it from another side. And the same is true of division of occupations.

Division of Labor Illustrated.—A good illustration of division of labor is afforded by the needle-making industry as it is generally conducted to-day. Steel wire, which is itself the product of highly divided labor, is the raw material of the needle factory. All needles pass through the same general list of processes. These, as the visitor to the factory may view them, are in outline as follows: The wire is first put through a machine called the straightener and cutter, which removes all bends in the wire and cuts it into pieces about one-third the length of the finished needle. These short pieces, called *blanks*, are placed in small iron cylinders, which are rotated in such a manner as to keep the wire in constant motion under friction. They are thus freed from scale and dirt, and are ready for

"cold swaging." For cold swaging, the blanks are put into a hopper, from which they are taken by machinery, one at a time, and held so that one end is presented to the action of a set of revolving sectional steel dies. By the constant opening and shutting of these rotating dies, the end is compressed and drawn out to form the needle "blade." After the swaging is finished, another bit of machinery is made to stamp upon the flattened surface of the needle a number or mark, which indicates what sort of needle it is finally to be. Inequalities are next remedied byrimming all blanks to a uniform length. When the blanks have been trimmed and stamped, they are taken to a grooving machine, by which a short groove on one side of the needle and a long groove on the other side are made simultaneously. The needle is now ready for its eye. Women are usually employed in this process, which calls for a high degree of manual dexterity and keen sight in controlling the blanks as they are "fed" through the machine. One girl with modern machinery can punch about seven thousand needle-eyes a day, or more than a dozen a minute. The needles are next given their points by machines, which differ according to the kind of point, as "round," "twist," "diamond," etc. So far as shape is concerned the needles are now complete; but the softness of the steel up to this point makes them useless for practical purposes. They must therefore be hardened and tempered, and this in turn requires several distinct processes and opportunities for divided labor. Next they are sharpened and polished by a piece of machinery which holds nearly a hundred of them at once against a brass wire scratch-brush revolving 8000 times a minute, and afterward against a bristle brush. The eyes of the needles are then smoothed by stringing the needles on a cotton thread, covered with oil and emery, which is drawn back and forth at different angles to the needles so that the polishing powder acts on all parts of the aperture. Next follow finish pointing, done on a fine emery, and finish-polishing, done by a revolving brush with crocus and alcohol. Counting and packing offer still further opportunities for divided labor, by which the utmost economy of energy is achieved.

The Advantages of Division of Labor. — It has been usual for economists to enumerate the advantages of the division of labor as follows : First of all, it secures (1) a gain or *saving in time*. This gain in time is twofold. (a) The workman does not have to pass so frequently from one operation to another, and (b) he can learn his special process in less time. In the second place, division of labor secures (2) *a gain in skill*. In the third place, the system results in a (3) *gain in adaptation, by finding a place for every one and putting every one in his place*. The man who is physically or mentally strong can devote his whole time to work that is worthy of him, while the man who is weak in muscle or in mind can find work in which great powers would in part be wasted. In the fourth place, division of labor secures (4) *a gain by paving the way for invention*. The processes being rendered simple, the individual workman can make himself more familiar with them, and can therefore see where and how improvements can best be made. It has therefore happened that a large proportion of modern inventions have come from the brains of the workmen. Finally, division of labor secures (5) *a gain through a more complete utilization of capital*. Each workman using one tool or one set of tools, or operating one machine, keeps the capital employed all the time.

Disadvantages of Division of Labor. — But division of labor has also its dark side. First of all, the system, by making possible and profitable the employment of women and children, (1) *often deprives men of their employment*. In American cities, one may sometimes find fathers at home "keeping house," while their wives and children are working long hours in factories. In the second place, division of labor (2) *gives rise to a dependence of man upon*

man that is often, at least in part, an evil. Thus a strike by a particular group of men in one business—mining, for instance—may throw out of employment not only all the other men in that business, but also thousands or tens of thousands of other men whose work depends upon the product of the industry in which the strike occurs. The same sort of hardship results from division of labor when workmen too old to acquire a new trade are deprived of their usual employment by a change in the conditions or methods of production. These evils, to be sure, right themselves in the long run; but, as one writer has keenly remarked, the long run is too long for the ordinary man, whose life is but a short run. A third evil connected with the system of divided labor is, that by it (3) *labor often loses its attractiveness and, at the same time, its educational value.* A workman who makes a whole watch can acquire such love for his work as makes him an artist; but who can learn to love the mere routine of putting metal disks under the face of a die for ten hours a day? “It is,” as one writer has well said, “a sad thing for a man to have to testify that he has never made more than the eighteenth part of a pin.”

III. THE ORGANIZATION OF THE FACTOR CAPITAL

In the foregoing discussion of the organization of labor, it will perhaps have been noticed that the organization of labor is intimately associated with the organization of capital. That division of labor would never have developed without that organization of capital in the form of machinery which is characteristic of modern industry, is well illustrated in the description of divided labor in the

needle industry. We need not concern ourselves further, therefore, with a separate consideration of the organization of capital.

IV. THE ORGANIZATION OF THE FACTOR LAND

Territorial Division of Labor.—To a certain extent the same is the case with the organization of natural agents as with the organization of capital. Labor is human effort applied to natural agents, usually aided by capital. Organization of labor, therefore, generally involves at the same time organization in the use of natural agents and capital. But there is one form of organization of production that is so generally conditioned by the factor, nature, that we may well treat it as a form of organization of the natural agents themselves. The two names most commonly applied to this form of organization are *localization of industries* and *territorial division of labor*. As with the division of labor, so with localization of industries, the tendency is toward increasing specialization of function, in the one case among persons, in the other among places. Thus the territorial specialization by which country districts supply the towns with food, receiving manufactured goods in exchange,—society thus dividing its labor into country work and city work,—is like the primitive divisions of occupations, among savages, into man's work and woman's work. And the finer territorial specialization by which certain agricultural regions produce almost exclusively some one product or some few special products, while certain manufacturing centres similarly devote themselves to making some one commodity or some few commodities, may, in the same way, be likened to that form of division of labor which we have described at length.

The last United States census contains many interesting illustrations of territorial division of labor or localization of industry. According to the census, more than half the gloves of the country, measured by their value, are made in the adjoining towns of Gloversville and Johnstown, in east central New York. Moreover, the value of the gloves manufactured was more than two-thirds of the total value of all manufactured products in the case of Gloversville, and more than one-half in the case of Johnstown. Troy, New York, produces nearly three-fourths, in value, of all the collars and cuffs made in the country, and nearly seven-tenths of all the manufacturing workmen in Troy are engaged in this one industry. Philadelphia makes over 45 per cent of the country's carpets. Nine-tenths of the wage-earners in South Omaha, Nebraska, are engaged in slaughtering and meat-packing.

Among the causes which lead to such localization of industry, the following, mentioned in the census volume, are probably most important: nearness to materials, nearness to markets, water-power, favoring climate, local supply of the kind of labor needed, local supply of capital for investment, the momentum given by an early start. Inasmuch as most of these causes have to do with geographical considerations, rather than with labor, it will be understood why we have treated localization of industries as a form of organization of natural agents, rather than as a phase of the organization of labor.

Just as advancing civilization brings increased specialization or division of labor, so we may expect that the future will witness an ever growing specialization of industry on geographical lines. Increasing stability of governments, improved methods of rapid transit, the

breakdown of interracial antipathies and prejudices, are making world markets possible, and with the world markets will come a condition of affairs in which every country and every section of every country will confidently produce to the utmost those goods in the production of which it enjoys the greatest relative advantage.

V. CONDITIONS DETERMINING THE ORGANIZATION OF PRODUCTION

We have already noted in passing one or two of the conditions upon which depend the efficiency of organization of production. It may be well to bring them together at this point and to speak at the same time of an even more important factor which conditions all production, no matter how organized.

1. *Extent and Character of the Population.* — Perhaps first in logical importance is the size and character of the population. The more numerous the consumers, the greater must be the supply of goods; and the greater the supply of goods, as a general rule, the more minute will be the organization which will be found economically profitable. This idea is often expressed in the statement that *division of labor is conditioned by the extent of the market.*

2. *Growth of Capital.* — The second great condition of the organization of industry is the growth of capital, whether in the form of machinery or in the form of means of transportation and communication and exchange. Improvements in machinery have made increased specialization and organization technically possible, while railways, telegraph and cable lines, and banks have widened

the markets and have thus made such organization economically possible, that is, profitable.

3. *The Character of the Industry.*—Not all industries lend themselves equally to some of the kinds of organization that we have described, no matter what the population or the extent of capitalization. Agriculture has hitherto in the main defied all attempts at minute division of labor. Manufacturing lends itself to division of labor in the highest degree. Without entering into a discussion of all the technical reasons for this difference, we may say that the main requirement, within the industry itself, for minute organization is that the different processes shall permit of being carried on simultaneously. We all know that this feature of industry is characteristic of manufacturing, and that, on the contrary, it is almost entirely lacking in the case of farming.

4. *The Character of the Government.*—A fourth condition of efficiency of organization is the character of the government. Even the most advanced States differ in many ways in structure and in the legal conditions which they enforce, but all civilized States secure at least the following conditions of efficient organization: they all (1) maintain the institution of private property; (2) protect life and property from enemies without and within the nation's borders; (3) create and maintain the institution of contract; and (4) participate directly in industry in cases in which it has been clearly proved that individuals will not act at all or will not act for the best interests of industry as a whole. Thus, all civilized governments maintain coinage systems, regulate weights and measures, establish and care for docks, lighthouses, and roads, and maintain a consular service in foreign lands.

VI. LARGE SCALE AND SMALL SCALE PRODUCTION COMPARED

Modern times have witnessed a wonderfully rapid growth in the average size of the individual business. Indeed, the change in the size of the business unit during the past half-century is almost as striking as the change from house industry to factory industry in the second half of the eighteenth century. The movement has gone so far and is still proceeding so rapidly as to excite very general fear as to its social consequences. Certain dangers resulting from the consolidation of large competing corporations will be discussed elsewhere; but it is pertinent at this point, in connection with the subject of the organization of production, to advert briefly to the advantages claimed for large scale production and to the compensating advantages enjoyed by small scale producers.

Advantages of Large Scale Production. — The advantages claimed for production on a large scale resolve themselves into two general classes: (1) *economies in making the goods*, and (2) *economies in marketing the goods*. As to the first, it is claimed that in production on a large scale there is a saving in (a) *capital cost*, per unit of product, both *in fixed and in circulating capital*; in (b) *labor cost*, owing to the possibility of more efficient organization; in (c) *the possibility of making improvements*, both through the employment of special investigators and inventors, and through the comparison of methods in different departments of the same factory or in the same departments of different factories under the same ownership; in (d) *the cost of superintendence*; in (e) *the utilization of waste*, as is instanced by the Standard Oil Company and the large

beef and pork packing companies; in (*f*) *providing their own aids to making and marketing*—making their own cans, boxes, etc., and owning railways and steamship lines, etc. In businesses enjoying this last advantage, we have examples of *integration of industry* as well as of *concentration of industry*.

Among the second class of advantages claimed for large scale production, economies in marketing the goods, are the following: (*a*) *economy in securing trade*, through advertising and commercial travellers; (*b*) *economy in "carrying" stocks of goods*, a relatively smaller stock being sufficient to meet the fluctuations in demand; (*c*) *economy in getting goods to consumers*, through the power to secure better freight rates for large shipments, and through the power possessed by some concerns to avoid "cross freights"; (*d*) *economy in securing a foreign market*, through the greater power of the large concern to withstand the cut-throat competition common in "hard times."

The Strong Points of Small Scale Production.—Against these alleged advantages of large scale production may be set the following considerations which seem to promise a continuation of a considerable measure of small scale production, at least in certain lines of industry: (*a*) First of all, it is claimed by experts that in many lines of business *a plant of moderate size is the plant of really maximum efficiency* in regard to capital and labor costs. (*b*) In many cases the advantage of the large scale business in the matter of concentration of power is neutralized by the fact that *modern invention*, especially in connection with electricity, *is revolutionizing the methods of distribution of power*, putting the small manufacturer on a level with his greater rival. (*c*) It is, furthermore, very doubtful

whether large scale producers can secure that *minute and economical supervision* which characterizes small scale industry ; whether, in other words, hired managers can compete in this regard with individual entrepreneurs who will reap all gains as they bear all risks. (d) The small producer has a distinct advantage in his greater *power to know the personal wants of his market*. In many industries the personal element plays so large a part that the small producer will for a long time be able to hold his own, even if he cannot oust the large producer from the field. Finally, *by coöperation of neighboring small producers, it is possible to secure much the same opportunities as to (e) invention and improvement of processes and (f) utilization of "waste" that we have spoken of as regularly inhering in large scale industry.*

It must be borne in mind that our comparison has been between small scale and large scale production, not between small scale production and monopolized production. Monopolized production is usually, though by no means always, production on a large scale. But production on a large scale is not at all the same thing as monopolized production. Had we been speaking of the production of monopolized goods, it would have been possible to add many to the list of alleged advantages or economies in production, and some of the advantages of which we have spoken would in the case of a monopoly have been much more marked and undisputed. Thus in the matter of "cross freights" and again in the case of advertising, many would admit advantages in the case of a monopoly who would deny that they accrue simply to large scale production.

This whole matter of the relative advantages of small

scale and large scale production has been of late days the subject of rather acrimonious debate, and can by no means be regarded as settled. We have chosen, therefore, to write rather suggestively than positively. For this very reason, however, the topic should furnish the better material for discussions and debate by the class.

SUMMARY

1. Growth in the magnitude of industry has resulted in increased complexity of industrial organization.
2. The entrepreneur directs the organization of the factors, but his function is sometimes shared among many individuals.
3. Forms of organization of the factor labor are simple associated effort, division of occupations, and division of labor.
4. Organization of the factor nature gives rise to localization of industry.
5. The limits of profitable organization of industry are the size and character of the population, the amount of capital, the character of the industry itself, and the character of the government.
6. In some industries there are many advantages in production on a large scale. Against these may be set other features in which the small scale producer may hold his own, or even enjoy an advantage.

QUESTIONS

1. How was coöperation of the factors secured before the Industrial Revolution? Where does this method obtain to-day in advanced nations?
2. Name some of the duties of an entrepreneur.
3. Name the different forms of business undertaking. Discuss them from the standpoint of their relative strength and weakness.
4. How does division of occupations differ from division of labor?
5. State the advantages of the division of labor; the disadvantages; the advantages of large scale production; the advantages of production on a small scale.

6. Describe the processes under a system of divided labor in some industry with which you are acquainted. Why does not farming lend itself to the division of labor?

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PART III.—TRANSFERS OF GOODS

CHAPTER I

INTRODUCTORY

The Nature of the Subject. — We have now studied two of the main parts of economic theory. We have learned something regarding the consumption of goods, and also something regarding their production. We have now to study the question how and by what means goods are exchanged among men, and what determines the quantitative ratios in which they exchange. By the conditions of modern industry almost every man produces more of some one commodity or of some few commodities than he himself consumes; and, on the other hand, every man consumes very many goods which he himself has not produced. This is only possible because men transfer goods from one to another. Such transfers of goods constitute a very great part of our economic life. The business of one important industrial class, that of merchants, consists in effecting such transfers. The operations in which merchants are engaged we call by the general name *commerce*. But commerce requires a multitude of other businesses to assist it, among which are especially prominent those of providing means of communication and transportation, such as public roads, railways, telegraphs, telephones, and

banks. These agents of commerce, while they do not confine their functions entirely to the assistance of merchants, aid the entire community in bringing about desired transfers of goods.

Exchange. — Transfers of goods are of two kinds: they may be either one-sided transfers, as in the case of gifts, bequests, inheritance, taxes, and fines; or they may be two-sided transfers, as is the case with nearly all economic transfers with which we have to do.

The part of economics which we are about to study is by most economists called "exchange," because the term "exchange," referring to two-sided transfers, covers so many of the transactions that are the subject of our study. But since money and banks, which are to be treated in the present part of the book, are agencies in assisting in one-sided transfers as well as two-sided transfers of goods, we have used the expression "transfers" of goods rather than the word "exchange" to express more completely the nature of the subject.

Since exchanges of goods regularly increase the utility of the goods exchanged, it is evident that exchange is a part of production and might be treated under that general heading. But the phenomena of exchange are of a character so distinct and so important that it is considered better to treat them in a part by themselves.

Advantages of Exchange. — It is not uncommon even to-day to hear men talk as if an exchange of goods could benefit only one of the two exchangers. Sometimes, indeed, men speak as if what is gained by one party to an exchange, whether an individual or a nation, must be at the loss of the other. We do not stop to think that when we purchase a hat or a suit of clothes, we regularly profit

by the transaction; but it is evident that if we did not think the thing purchased more useful to us than the money paid for it, we would not make the exchange. Let us study for a moment the reasons why men find it profitable to exchange. In the first place, (1) the *tastes and customs* which in part determine utility *vary (a) from nation to nation, and (b) from man to man.* It is evident, then, that when a commodity passes from an individual or a nation with little taste for it to one with a strong liking for it, the exchange increases the utility of the commodity. In the second place, (2) the *natural resources* of different countries *vary widely.* Goods which one country or one section can easily have in abundance, another country or section may be able to produce only with great difficulty. Thus, the planter of the South and the farmer of the Northwest can both profit by the exchange of the cotton of the one for the wheat of the other. In the third place, (3) *individuals also differ from one another either by nature or by training in their fitness for different kinds of work.* Thus, one man is especially fitted by nature or by training for carpentry, another for milling. In all such cases each individual will find his greatest advantage in doing that which he can best do, exchanging the surplus of his product for other goods which he desires but which others can produce to greater advantage.

The Machinery of Transfers. — In every modern nation there now exist on a large scale institutions and appliances for the furtherance of transfers. These may be briefly enumerated as follows: (1) means of transportation and communication; (2) systems of weights and measures; (3) money and credit and banks; (4) commercial laws and commercial administration, including

the assistance of consuls who act in part as commercial agents of their governments in foreign countries ; (5) middlemen of all sorts, including retail and wholesale dealers. Inasmuch as exchange is a part of production, these instruments of exchange are also instruments of production. It is through them that goods receive the time and place utilities which fit them for final consumption.

SUMMARY

1. Transfers of goods are of two kinds: one-sided and two-sided. The latter are known as exchange, under which heading this general subject is often treated. Exchange develops the phenomena of value and price.
2. All exchange is regularly profitable to the two parties to the transfers, for the reasons that men and places differ in their natural and acquired aptitudes for different kinds of production, and that individuals and nations also differ in their tastes and customs in consumption.
3. Modern industry has developed an elaborate mechanism for its exchanges, including means of communication and transportation; systems of weights and measures; money and credit and banks; commercial laws and administration; middlemen of all sorts.

QUESTIONS

1. Give examples of one-sided transfers; of two-sided transfers.
2. What are some of the sources of advantage in exchanges between the United States and Cuba? Between a lawyer and a doctor?
3. Mention some of the means of transportation; of communication.
4. How would the adoption of international systems of weights and measures aid exchanges?

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CHAPTER II

VALUE

Meaning of the Term. — One of the most important and difficult problems in economics, and the central problem in transfers or exchange, as well as in distribution, is that of the determination of value. Why do goods exchange one for another in the proportions that they do? Why do the proportions in which they exchange vary from time to time? This is the problem which we now have to study.

First of all we must note that there are two closely related but distinct ideas of value, which have been called by the names "subjective value" and "objective value." Let us try to get an understanding of these ideas and of the relation between them. Our study of the law of diminishing utility has shown us that as our stock of any commodity increases, the marginal utility falls; that is, we care less for an additional portion of it. We satisfy our most intense wants first, and, as our supply increases, our unsatisfied wants grow less and less urgent. If, for example, we had but a very small supply of water, we should use it for drinking purposes only: a first increase might be used for bathing; a second, for washing dishes and clothes, and so on. The more the supply increases, the less capacity would a gallon have to excite our desire, the less sacrifice would we undergo to get an additional gallon, and the less should we trouble ourselves about the

loss of a gallon. It is the marginal utility that determines the *economic importance* of any commodity in our estimation. These phrases, "capacity to excite desire, marginal utility, economic importance," are synonymous with the term "subjective value." For a brief definition, we may say, "subjective value is the capacity to excite desire." Notice the close relation and yet the sharp contrast here between utility and subjective value. A cubic foot of air has great utility, but it has no value. Yet anything, to have value, must have utility, since it is utility under a condition of scarcity that excites desire. We may sum up the relation of the two things thus: *utility is the power to satisfy wants; subjective value is the power to excite desire.*

How Subjective Value is Determined. — It is now easy to see how subjective value is determined. It is *utility under a condition of scarcity*. To possess value, a thing must be able to satisfy wants, and it must exist in less than sufficient quantity to satisfy all wants.

The Idea of Objective or Exchange Value. — The idea of objective or exchange value is a simple one. *Objective value is the quantitative ratio in which goods or services are exchanged.* Thus, if a pound of butter exchanges for four pounds of sugar, we say that it is worth four pounds of sugar, or that its value in terms of sugar is four pounds of that commodity. In our day most commodities are exchanged directly for the single commodity money, and are exchanged only indirectly for those goods or services which we consume. It results that we usually think of value in terms of money ; that is, we think of prices. *For price is objective value expressed in terms of money.* But if a unit of one commodity exchanges for one dollar, while a unit of another commodity exchanges for two

dollars, it is evident that the value of the first commodity is one-half that of the second.

The Relation of Objective to Subjective Value. — And now let us compare the two ideas of value together. Let us see how out of these individual valuations there results an objective market value. Imagine a market to which eight farmers have each brought a load of corn to sell, and to which eight other persons have come, each of whom wishes to buy a load. Suppose each seller to have settled upon a price per bushel less than which he does not wish to take, and suppose each buyer to have fixed a price more than which he does not intend to pay. Let these estimates be as follows : —

Buyers' maximum prices : 69, 67, 65, 63, 61, 60, 59, 58.

Sellers' minimum prices : 70, 69, 68, 64, 62, 60, 59, 58.

Assuming that each one is alive to his own interest, and that he does not make a bargain until he is sure that he cannot do better, what will be the market price of corn per bushel ?

The price evidently cannot be 70 cents, for no buyer will pay so much ; it cannot be 65, for since five are willing to sell at this price and only three to buy, the competition of the five in their efforts to sell to the three must bring down the price. Continuing to test each possible price in this way, we get the following table : —

At 64 cents there are 3 buyers and 4 sellers.

At 63 cents there are 4 buyers and 4 sellers.

At $62\frac{1}{2}$ cents there are 4 buyers and 4 sellers.

At $62\frac{1}{2}$ cents there are 4 buyers and 4 sellers.

At 61 cents there are 5 buyers and 3 sellers.

It appears that at 62 and at 63 cents (or at any price between) there are as many buyers as sellers, namely

four, and that four loads will be sold at a price somewhere between these limits. These are the prices at which demand and supply are equal.

The actual buyers in this market are those with the estimates 69, 67, 65, 63. The last of these is called the marginal buyer, because with a rise in the price he would be the first to be excluded. The actual sellers are those with the estimates 62, 60, 59, 58. The first of these is called the marginal seller, because with a fall in the price he would be the first to be excluded. Notice that the marginal buyer's estimate — the marginal demand price — is about equal to the marginal seller's estimate — the marginal supply price. We may say, then, that *the market price is an equilibrium between the existing state of the supply and the existing state of demand*. In a previous chapter on Demand we have sufficiently considered the forces lying back of the buyers' estimates. We must now inquire into the forces governing the sellers' estimates, that is, those lying back of supply.

Different Causes of Scarcity. — Scarcity is not everywhere the result of the same cause. First, (1) we may have *absolute scarcity*, as in the case of paintings by old masters, unique natural products, etc. In such cases the quantity cannot be increased at all. This class of goods is not very important. Secondly, (2) we may have *monopoly scarcity*, a scarcity caused by the fact that the quantity is under the control of one or more persons who act together to control the offerings of such goods to society. The case of monopoly goods will be discussed separately and at length in the following chapter. Finally, (3) we may have *scarcity caused simply by the fact that men must undergo sacrifice in order to increase the quantity*. The

greater proportion of the goods which we consume fall into this class. A simple way of describing such goods would be to say that they are *freely produced*.

Cost of Production and Value. — The value of this third class of goods is due to precisely the same cause that lies back of the value of all goods, namely, utility under a condition of scarcity. But it is commonly said that with these freely reproducible goods, cost of production determines value. It is true that the price of these goods is not far from their *expenses of production*. It is easy to see why: If any article is selling for \$5 when the expense of producing it is only \$1, many persons will turn to the manufacture of this article, the supply is increased, and the price falls to something like \$1. But what determines the expenses of production? Why cannot a baker, for example, sell bread for much less than five cents a loaf? To say that he must pay a certain price for flour among other things, is merely to put the difficulty one step farther off. Why will all those who immediately or remotely help to make the flour not work for less? There are two possible answers: They might in some cases prefer to be idle rather than work for less, or they might feel that they were sacrificing the opportunity of making something else for which there are equally urgent wants. Here we have the fundamental sense in which cost of production limits the supply of an article: It is either because of the pain of further work or abstinence, or because by making one article there is sacrificed the opportunity of making another. The supply of snow-shovellers is limited partly because some boys prefer to coast rather than to work, and partly because other boys who are willing to work find that there is opportunity of earning more by minis-

tering to the wants of other people than those who have snow to shovel.

Back of the expenses for labor, raw material, etc., which the business man has in mind when he speaks of cost of production, lie these real sacrifices of production. The exact connection between the two is not always easy to trace, and in studying many problems in business it is sufficient to pay attention only to the expenses of production. In the remainder of this chapter we shall use the term "cost of production" in this sense.

In discussing the conditions governing the supply of freely reproducible commodities, many writers distinguish three classes, as follows: (a) those that can be increased in quantity without proportionate increase in cost; (b) those that can be increased at a proportionate cost; and (c) those that can be increased in quantity only by a more than proportionate increase of cost. The difference may be briefly expressed by saying that production in the first case conforms to the law of increasing returns or diminishing costs; in the second case, to the law of proportionate returns; in the third case, to the law of diminishing returns or increasing costs.

It is to be questioned whether there is any industry in which the law of increasing returns operates indefinitely or until the whole market is supplied. It may be true of transportation or other natural monopolies, although it is doubtful. But there is a competitive field in which it clearly does not operate without limit. In agriculture, manufactures, and commerce there is at first an increasing return, possibly for a time a constant return, and then a diminishing return as the establishment grows in size. Sooner or later the point of maximum efficiency is reached, and then the law of increasing costs begins to operate. It is clear that in agriculture that limit is reached rather quickly, while a textile factory can reach a large size before the point of maximum efficiency is reached. If it were not for this limited operation of the law of increasing returns, we should have present the con-

ditions for a growth of monopoly over the entire industrial field, inasmuch as the largest producers could undersell all others.

Marginal Costs Explained. — In the industrial world, as it is constituted, the actual costs of production are not the same for all units of supply, no matter whether the supply be large or small. Thus, in the case of agriculture, some farmers have more fertile or better situated farms than others. In manufactures, the same difference obtains though in a much slighter degree. Some entrepreneurs are better organizers than others; some have better situations with reference to the raw materials or to the market, etc. The costs being thus different, what are the costs which determine value on the side of supply? It cannot be the least cost or the average cost, for in either case a large part of the product would be sold for less than its cost. It follows that the determining costs are the greatest, or as we may call them, the *marginal costs of producing that supply which will be in equilibrium with the existing demand*.

The "Frictional Elements" Considered. — In order that there might be perfect competition, it would be necessary that every producer should always know and seek his own economic interest; that he should be able to throw his labor, his capital, and his land from one occupation to another or to no occupation at all at a moment's notice, and without that loss which the *vis inertiae* of business actually occasions in such cases. From the fact that these conditions are only imperfectly realized, it results that the prices of commodities day by day, or, as they are called, the *market prices*, fluctuate according to the importance of the frictional elements present, as well as with changes in the state of demand and changes in the costs of production.

But the market price of competitive goods is kept from violent fluctuations by the fact that competition is also present, and that so far as the competition is free and complete it is working to produce harmony between demand and supply, between marginal utility and marginal cost, between producer and consumer.

It remains for us to consider briefly but in detail some of the frictional elements which are most frequently present in modern business, preventing the realization of the perfectly competitive price.

1. *Custom.* — One influence which we have to notice as being opposed to competition is that of custom. By force of custom, acting especially in retail markets, the prices of commodities may stand for some time above the normal level. It is evident, however, that custom is powerless to maintain a price below the normal, unless the seller has some economic advantage that he is willing to share with his customers. Otherwise such a price would spell ruin for the retail dealer.

2. *Immobility of Labor.* — A second frictional element is the immobility of labor. Our law of value assumes a competition by which laborers will move freely from place to place, and from occupation to occupation. There are very many cases in which the facts of real life do not accord with this assumption, although it is true that with advancing civilization such competition approaches nearer and nearer to realization. It is easier than ever before for men to travel from places in which labor is plentiful to places in which labor is scarce. On the whole, it is easier than ever before for men to transfer their labor from one industry to another. Especially is it easier in our day for parents to choose the occupations for which they will train their children. But inasmuch as laborers are often prevented even now by home ties, or poverty, or ignorance, from carrying their labor to the best market for it, and inasmuch as they are similarly prevented in many cases from entering into occupations which might prove more remunerative, it

often happens that labor in different places or in different occupations is not rewarded in proportion to the sacrifice involved. In such cases, although the supply of the commodity may be determined by the cost of production, yet the cost of production of different commodities will not be proportioned to the actual sacrifices incurred, and there is in such cases an apparent rather than a real exception to our theory of value.

3. *Unequal Taxation.*—Unequal taxation also gives rise to exceptions to our theory of value, unless we are prepared to regard taxes themselves as a part of the cost of production. If taxes were laid in equal proportions upon all industries, so that all products were raised in price in equal proportion, then the ratio in which different commodities would exchange for one another might remain the same. In other words, values might not be affected. But such taxation is clearly impossible, and therefore we are obliged to qualify in this regard our theory of value.

4. *Planless Production.*—In our complex industrial system producers have to plan their production for distant times and distant places, and in ignorance of what rival producers are doing. It can easily be seen that in such a state of things the production of some commodities may be carried far beyond the point at which the demand for the commodity is great enough to permit a price that will repay the cost of production. The resulting glut in the market may continue for some time before the entrepreneurs by lessening production can secure a return to normal prices. The technical condition of modern industry contributes strongly to the same result as that just described. When a producer has invested large amounts of capital in the form of expensive buildings and expensive machinery, he is not unlikely to continue production even when the price of the product is too low to repay all the costs. For when such large fixed capitals remain idle, the abstinence involved in the production of that capital is receiving no reward at all, to say nothing of the fact that the buildings and machinery may actually be deteriorating more rapidly than they would if

they were busy. The entrepreneur, therefore, has to choose, not between gain and loss, but between a greater and a lesser loss, and in choosing the lesser loss, he may keep buildings and machinery working even when the market is glutted with the commodity which he is producing. It is for this reason among others that in modern days industrial depression, when it comes, is so long continued and distressful. Prices cannot easily or rapidly return to their normally competitive level when supply greatly outruns profitable demand.

5. *Value of Products and By-products.* — The fifth case, that of products and by-products, really accords with our theory of value, but requires special attention. When as an incident to one main line of production, one or more products of less significance result, the chief commodity is called the product and the others by-products. Thus wheat is a main product of which straw is a by-product. To take another illustration, the Standard Oil Company has as its central industry the refining of crude petroleum into illuminating oils, but with every year scientific discoveries have made possible new uses for parts of the crude oil which were formerly thrown away. These incidents to the production of illuminating oil, or by-products as they are called, include lubricating oils, aniline dyes, paraffin, etc. In such cases it is evident that the theory of value is complicated in its application. The general principle to be noticed is that the combined value of the products is determined by the total cost of production. Producers, of course, regulate the production of the joint products so as to secure the largest total return. This is commonly done by producing all of the main product that can be sold at profitable prices, at the same time selling the by-products at such prices as will insure their sale. In such cases, if the demand for the principal product increases, production also increases, and as larger quantities of the by-product naturally result, these must be sold at lower prices, unless it happens, as is unlikely, that the demand for the by-products increases at the same time and at the same rate as does the demand for the main product. Sometimes the demand for the by-product increases so greatly as to

make it profitable to regulate production according to its price rather than according to the price of the main product. Thus in the case of mutton and wool, some sheep raisers are so situated that wool is the main product of their business, and mutton a by-product, while with other producers the order is reversed. We may say in conclusion, then, that the total prices of products and by-products are determined by total costs, and that the relative prices are determined, subject to this condition, by the relative market demand for the different commodities.

SUMMARY

1. Subjective value is the capacity of any good to command a sacrifice. Objective or exchange value is the quantitative ratio in which any two goods exchange. The second sort of value depends upon the first.
2. Competitive value is the meeting point, or point of equilibrium, between supply and demand.
3. Different conditions of scarcity are : absolute scarcity, monopoly scarcity, and scarcity due to the sacrifices of production.
4. Cost of production, which controls supply, is used in at least three senses: expenses of production, pains of production, and sacrifice of opportunity.
5. The effective cost of any quantity of a good is the highest or marginal cost of producing that quantity.
6. Perfect competition is rarely if ever realized.
7. Frictional elements interfere with the free working of competition.

QUESTIONS

1. What is subjective value? Objective value? What is their relation?
2. Show how a market price is determined.
3. Describe the three causes of scarcity of economic goods.
4. What are the various meanings of the term "cost of production"?
5. What is meant by marginal costs?
6. What are some of the actual conditions opposed to the free working of competition?

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CHAPTER III

MONOPOLIES AND MONOPOLY VALUE

IN the preceding chapter we reached the conclusion that in the case of goods freely produced under competitive conditions, value is determined on the side of demand by the marginal utility, and on the side of supply by the marginal cost of production. At the same time it was pointed out that not all goods are thus produced. The largest and most important class of such exceptional goods consists of those produced by monopolists. In order to complete our theory of value, therefore, we must now inquire how monopoly value is determined ; and that we may do this the more understandingly, let us first see what monopoly is.

Definition and Classification. — It will be well for the student to study very carefully the following definition, inquiring at every step just what the words and phrases mean : *Monopoly means that substantial unity of action, on the part of one or more persons engaged in some kind of business, which gives exclusive control, more particularly, although not solely, with respect to price.*

Many classifications of monopolies have been made by different writers, and still others might be made ; but it is believed that the following classification, which both explains the origin of the different monopolies and suggests their real nature, will prove as helpful as any to the student : —

A. Social Monopolies.**I. General Welfare Monopolies.**

1. Patents.
2. Copyrights.
3. Trade-marks.
4. Public consumption monopolies.
5. Fiscal monopolies.

II. Special privilege monopolies.

1. Those based on public favoritism.
2. Those based on private favoritism.

B. Natural Monopolies.**I. Those arising from limitation of supply of raw material.****II. Those arising from peculiar properties inherent in the business.****III. Those arising from secrecy.**

Social Monopolies.—Businesses are social monopolies *when they are made monopolies not by their own inherent properties, but either by legislative enactment or by forming so close a connection with great natural monopolies that they partake of the nature of the latter.*

In old times kings and queens frequently granted exclusive business privileges to favored persons, and permitted no one except those named to engage in such undertakings. Such monopolies, however, became so odious that sovereigns were compelled to cease granting them. Governments still create exclusive privileges by *patent* and *copyright* laws, but they do so in behalf of the general public. Authors and inventors are given exclusive rights over their productions for a limited period. These monopolies have perhaps justified themselves

through the stimulus which they have given to invention and authorship. Yet it must not be forgotten that all intellectual achievements are in part a social product,—that they are due in great measure to earlier achievement. The telephone was preceded by a century of scientific invention and discovery along the line of sound transmission, and most of that investigation was very ill rewarded. On the whole, experience seems to justify the conclusion that patents and copyrights are beneficial, but that patents do not rest on so strong a basis as do copyrights, since no two persons would ever write precisely the same book.

The *trade-mark* is a legal monopoly similar to the patent and the copyright. In connection with lavish advertising, trade-marks in recent days have been made the basis of enormous profits.

Public consumption monopolies and fiscal monopolies call for a word of special comment. They are to be distinguished the one from the other only by the object which the government has in view in establishing them. If the government manages for itself or grants to another a monopoly of the liquor traffic with the object of regulating the consumption, the monopoly is a public consumption monopoly. If, on the other hand, the chief object is not regulation but income, the monopoly is a fiscal one. Often the two objects are so blended that it is difficult or impossible to name the resulting monopoly.

Our classification names two kinds of special privilege monopolies. Those monopolies which are due to special tariff advantages or to other legislation are rightly said to be *based on public favoritism*. The other class of special privilege monopolies consists of those which grow up

through special favors granted by other monopolies, especially natural monopolies, such as railways.

Natural Monopolies. — Natural monopolies are *those which depend for their existence on natural forces as distinguished from social arrangements*. They grow up independently of man's will and desire, and sometimes even in direct opposition to it. The words which we have used in our classification will sufficiently explain the different sources from which they arise. By far the most important of all monopolies are natural monopolies of the second class, chief among which are the following: wagon roads and streets, canals, docks, bridges and ferries, waterways, harbors, lighthouses, railways, telegraphs, telephones, the post-office, electric lighting, waterworks, gasworks, street railways of all kinds. *Whenever there is a decided increment in gain resulting from combination, we have a tendency to monopoly which will overcome all obstacles. This increment of gain, which is the cause of monopoly, is always present in businesses that occupy peculiarly favorable spots or lines of land, and that furnish services or commodities which must be used in connection with the plant.* This may be said to be the law of natural monopolies.

Of late years there have been many economists who argue that monopoly may *naturally* arise without any of the advantages that have been indicated, through the superior power of great capital and the superior economy of great concentration. They would call such monopolies *capitalistic*. There is not space to give all the reasons for dissenting from this conclusion regarding so-called capitalistic monopolies. One or two very cogent reasons may, however, be stated. An exhaustive study of the cases cited in support of the alleged tendency to monopoly inherent in large capital has failed to reveal a single one in which the monopoly did not enjoy one or many of those

monopoly advantages which we have already mentioned and explained. Moreover, many cases in which the possession of large capital seemed on the surface to be a dominating influence, have been cases in which the monopoly was so short-lived as to furnish little support to the argument of those who cited them. After all, whatever may be the advantage conferred by large capital, we must remember that capital is so plentiful that one gigantic plant can always find a rival whenever a slight margin of profit invites its establishment.

Our conclusion then may be stated as follows: There is a great and growing field of industry in which competition is not natural or permanently possible, for reasons explained in the text; there is another field within which monopoly may easily be engendered by unwise social action, and which is likely to become narrower as the nation grows in intelligence and thoughtfulness; and finally there is a third field within which natural monopoly does not and cannot exist, and within which social monopoly is unlikely to arise.

Determination of Monopoly Price. — And now, having seen what monopoly is, we may attempt an answer to the question, How is monopoly value or monopoly price determined?

First of all, we may say that monopoly value, like any other value, is determined by the relation between demand and supply, and that demand is here as elsewhere determined by marginal utility. But the supply is not determined as under competition by the cost of production, but by *the desire of the monopolist to secure the maximum of revenue possible in the existing state of demand*. In other words, the monopolist, freed from competition, and governed only by demand, is able to adjust supply to demand in

such a way that the price will stand at the point of *highest net return*. In determining what price shall be fixed and what quantity supplied,—in other words, what is the point of highest net returns,—the monopolist consciously or unconsciously proceeds according to the following principles:—

1. He realizes that every increase in the supply of his monopolized product will result in lowering the marginal utility, and hence the demand price of the product, while every decrease in the supply will result in a higher marginal utility, and hence a higher price.

2. Of the expenses of production there are some that vary in almost regular proportion with the variation in the supply. Thus if the product is doubled, the cost of raw material will be just about doubled. Such expenses are called *variable expenses*.

3. Other expenses, within certain limits, remain more nearly the same, no matter what may be the amount of the product. These, called the *fixed expenses*, would include the cost of plant, salary of superintendent, interest on bonds, etc.

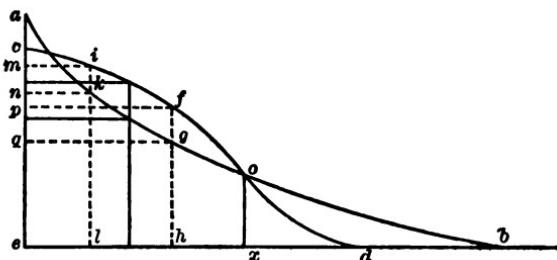
It follows from the above principles that the monopolist, since he is seeking the maximum net revenue from his business, will pay no attention to fixed charges in establishing the price of the product, but will consider only the variable expenses in connection with the probable demand for his goods at various prices.

An Illustration.—We may illustrate by an example the operation of these principles. The following table shows in parallel columns the number of sales of a monopolized good at different prices; the total resultant earnings; the variable expenses; the fixed expenses; the total expenses; and finally the net revenue or monopoly profit:—

PRICE PER UNIT	NUMBER SALES	TOTAL EARNINGS	VARIABLE EXPENSES PER UNIT	TOTAL VARIABLE EXPENSES	FIXED EXPENSES	TOTAL EXPENSES	NET REVENUE
\$.10	600,000	\$ 60,000	.03	\$ 18,000	\$ 50,000	\$ 68,000	-\$ 8,000
.09	800,000	72,000	.03	24,000	50,000	74,000	- 2,000
.08	1,200,000	96,000	.03	36,000	50,000	86,000	+ 10,000
.07	1,800,000	126,000	.03	54,000	50,000	104,000	+ 22,000
.06	2,500,000	150,000	.03	75,000	50,000	125,000	+ 25,000
.05	3,500,000	175,000	.03	195,000	50,000	155,000	+ 20,000
.04	5,500,000	220,000	.03	165,000	50,000	215,000	+ 5,000

Study of the table will show why, in the case assumed here, the monopoly price will stand at six cents. Competition, if it were present, would keep on increasing the supply as long as normal profit could be obtained. In our illustration the lowest price at which production could be carried on so as just to secure a profit above the expenses of production would be four cents ; and four cents would therefore be the competitive price or the price determined by the balancing of marginal utility against marginal cost of production. But since the monopolist has such control over the production that he can control the supply, he will cut off production at 2,500,000 units, at which point the marginal utility, and hence the demand, will fix a price of six cents, and will give the largest net return, \$25,000.

The student may be interested in seeing the same thing illustrated by a diagram. In the following diagram, we take only one possible case—that in which the monopolist is producing a commodity the making of which falls under the law of increasing returns.



In the diagram the curved line ab is taken to represent the varying cost of production, and is hence called the supply curve: the line cd , representing the *state of demand*, is similarly called the demand curve. The line ox would represent the price under competitive conditions. The perpendiculars fh and il represent the prices that would be fixed by the demand if the monopolist were to limit the supply to eh or il respectively. The lines gh and kl would represent the total cost per unit of producing these various quantities. The parallelograms $ghqe$ and $klne$ represent the total costs of the different quantities, and the parallelograms $fhep$ and $ilme$ represent the total returns from sales. Consequently the smaller parallelograms $fypq$ and $ikmn$, which equal the parallelograms representing total income, minus the parallelograms representing total costs, represent the net return. If the character of the two curves be known, it is possible to determine by mathematical formulæ where the parallelogram of greatest net return will fall, and consequently what will be the monopoly price. It will be well for the student to draw a similar diagram and find by experimentation the parallelogram of greatest area, and from this the monopoly supply and monopoly price.

The Effect of a Tax.—Our numerical illustration and our diagram may both be made to convey a lesson regarding the influence of taxation upon monopolies and monopoly price. Fixed expenses have no influence in determining the price. If, therefore, a fixed tax, say of \$5000 a year, were to be laid upon this monopoly, it would not result in an increase

of price. A study of the table will show that with such a tax the net revenue at price .08 would be \$5000; at price .07, \$17,000; at price .06, \$20,000; at price .05, \$15,000; at price .04, nothing. Thus price .06 will still be the point of maximum net revenue and hence the monopoly price. On the other hand a variable tax, for instance a tax of one cent per unit, would result in this case in raising the monopoly price. In our illustration, such a tax would make the net revenue at the price .08, — \$2000; at the price .07, \$4000; at the price .06, nothing; at the price .05, — \$15,000. Thus, though the monopoly would find its profits greatly curtailed by such a tax, consumers would be compelled to pay one cent more per unit for the monopoly product. The possible advantage which society might draw from the tax would therefore be wholly or in part offset by the increased cost of the commodity. Such a raising of the price will not take place, however, if the demand at the higher price is not sufficient to make as great a net revenue as at the lower price. We may conclude, therefore, that fixed taxes, or taxes on the net revenue of a monopoly, cannot be shifted wholly or in part by a change in price; while taxes laid in proportion to the amount of business, since they contribute an addition to the variable expenses, may be wholly or in part shifted by a change in price.

The student may profitably test these statements regarding monopoly by hypothetical cases after the manner of our numerical illustration, and by drawings similar to the diagram used to illustrate the determination of monopoly price.

A Law of Monopoly Price. — It is sometimes said that the price of a monopolized good depends solely upon the will of the monopolist. In the strict sense of the phrase this is not true. As our explanation has shown, the monopolist is *forced by economic motives* to establish such a price as will give the maximum net revenue. There are

certain conditions on the side of demand which therefore have a decisive influence in determining monopoly price. We may group the most important of these in a general statement which may properly be called a *law of monopoly price*: *The greater the intensity of customary use of the monopolized commodity or service, the higher the general average of economic well-being, and the more readily wealth is generally expended, the higher will be the monopoly price which will yield the largest net returns.* Thus monopoly, without any effort of its own, shares in the increasing wealth of a country, and absorbs a considerable part of it. It is, for example, among other influences, the larger wealth and the greater willingness to spend freely that makes monopoly more profitable in the United States than in Germany or other European countries. The search for other illustrations of the law should prove an interesting and valuable exercise for the student.

Public Policy regarding Natural Monopolies.—It was long ago said by a shrewd English engineer that where combination is possible, competition is impossible. Now combination is always possible in the case of natural monopolies of the second class. (See the classification.) Indeed, combination in such businesses is inevitable. If two gas companies in a city, each with a capital of a million dollars, are able without combining to make 10 per cent profits, they will, when combined, make much more than 10 per cent. The force drawing them together works as constantly, if not as uniformly, as the attraction of gravitation.

The testimony of experience on this point is ample. There is never any competition in this field. There is sometimes "war" to settle the terms of combination, and

popular language, when it uses the word "war" in this connection, as in speaking of gas wars, etc., is scientifically correct. What, then, should be the policy of the government in dealing with these industries? Ought we in the United States to substitute government ownership and management of such monopolies for private ownership and management? Some of these monopolies have been in public hands so long that we no longer think of them as a possible field for private enterprise. Such, for instance, are the roads and streets, the post-office, and, in many places, the canals. As to the others, it would at least be well to limit the charters and to make such a reservation of public rights as will later permit the government easily and readily to make such changes as the future may show to be wise.

Advantages claimed for Public Ownership. — The principal advantages which are claimed for public ownership of such monopolies call for a brief discussion.

1. *Increase of Public Prosperity.* — A general diffusion among the community of the great incomes now reaped by the private monopolies will tend to prevent an undue concentration of wealth while at the same time promoting general prosperity. Most of the enormous fortunes of our country have sprung directly from natural monopolies in private hands. It should be noted that if such private monopolies are taken over by the government, the income from them may be diffused in either of two ways. Charges may be placed so low that the price will simply cover cost without allowing for profits,—the method pursued by our post-office, and by the English telegraph service; or a profit may be derived from the industries, and this used to lower taxes or to benefit the people in other ways.

2. *Economy.* — How enormous is the waste of war in attempted competition in the field of natural monopolies may be seen on every side. Indeed, it has been estimated that, in the matter of railway construction and operation in the United States during the past fifty years, economic resources have been wasted which, had they been economically applied, would have been sufficient to build comfortable homes for all the men, women, and children now in the country. There is, therefore, a large basis of reason in the claim of those who maintain that public ownership of such monopolies would be more economical than the policy of private ownership and management has been.

When services of a monopolistic nature are performed by the public, great economies can often be secured by combining various services, such as water, gas, and electric lighting. Moreover, a better management is likely to result. It is only a popular superstition, now apparently passing away, that private enterprise is always and everywhere superior to public enterprise. The fact of the matter is that each should be superior in its own natural field.

Nor is it true that private enterprise always excels public enterprise in the matter of initiating improvements. The English government has introduced in the telegraph service improvements which our private telegraph companies have refused to adopt on account of the expense. The American post-office blazed the path for American express companies in developing the money-order business. The English Postal Savings Bank set a pattern for private savings banks in the establishment of branches and in the use of stamps posted on small cards for savings.

3. *Purification of Politics.* — Private monopolies must

be controlled by public authority ; but control means interference with private business, and interference begets corruption. Not a year passes that the country is not shocked by the disclosure of bribery and corruption in connection with the granting or extension of franchises or in some one of the many ways by which monopoly in private hands seeks to secure privileges, to free itself from duties, or to escape from deserved punishment. A lawyer prominently identified with monopolistic concerns has declared in a recent public address that the "ante-natal tax" which such companies are obliged to pay,—that is, the bribery necessary for securing franchises,—constitutes a regular element in the expenses of their business. This is one reason why our city governments are expensive. With public ownership and management of such monopolies, public interests and private interests are identified, and the best citizens can offer undivided allegiance to the cause of good government.

4. *Will overthrow Injurious Social Monopolies.*—It is generally agreed to-day that many social monopolies are advantageous, but there are others which are distinctly injurious to the best interests of society. Some of these injurious social monopolies have been made possible by special favors received from the natural monopolies which we are discussing ; as, for example, by receiving lower freight rates than competitors could secure. If all citizens could be assured just and equal treatment at the hands of natural monopolies, the limits of competition would be extended, while the limits of monopoly would be restricted. But it is problematical whether such just and equal treatment can be hoped for while natural monopolies are in private hands.

Jevons's Criteria. — The English economist Jevons, as a result of careful study of government management of monopolies, reached the conclusion that there are certain general principles or characteristics by which we may judge what monopolies the State may most safely undertake to manage. These characteristics may be briefly summarized as follows: (1) the business should be of a routine nature, as, for example, is the business of the post-office; (2) the business should minister to a permanent and widespread public need; (3) the business should be of such a nature as to be constantly subject to public criticism; (4) it should be of such a nature as to require a relatively small amount of capital in proportion to the amount of business done; (5) and finally it should be of such a nature that the technical apparatus required for its successful management may be easily and accurately understood.

As regards these criteria, it may be observed in the first place that they afford information only as to what businesses the State is *most likely* to conduct with success — success or failure being here regarded solely from the standpoint of the private business manager. In other words, there is no place in this statement of principles for the consideration that the State may promote the social welfare by managing business at what, in the language of the private entrepreneur, would be called a loss. Our public highways are almost everywhere a State-managed monopoly, created and maintained by taxation, not by fees or tolls. Judged solely by the standard of private management, they, therefore, do not constitute a successful business. Yet no one to-day would advocate a change in public policy which alone could make their management "successful."

In the second place, it may be observed that although we may be unwilling permanently to restrict the State's activity within the "ring fence" thus set up, yet we may well use Jevons's criteria as an aid in determining the order in which the State should assume the management of natural monopolies. Furthermore, it will appear on reflection that differences in the degree to which various natural monopolies now

conform to these criteria are not permanent, but are ever changing. Thus the railway business is becoming more and more susceptible to routine management; the need for its service becomes every day more widespread; it falls more and more under the intelligent criticism of the public. We may, therefore, question whether, judged even from the standpoint of private business, all natural monopolies may not in time be successfully managed by the State.

Conclusion. — Public sentiment in favor of public ownership of the natural monopolies of the second class is rapidly gathering volume and force. The advantages which might result from such a policy have been explained. While recognizing these, we must not overlook the enormous difficulties in the way of government ownership and control,—the serious problems of governmental organization involved, the problem of improving the civil service, of securing greater honesty and efficiency in the public business. In the case of government railways would arise the problem of rates and of the conflicting demands of different sections and industrial interests. In European countries these difficulties have proved very grave, and are still far from being successfully solved.

Even with the present strong tendency toward public ownership, it must of necessity be a long time before all natural monopolies will pass out of private hands. Meanwhile, there will remain the ever perplexing question of regulating the granting, extension, and renewal of franchises, and of the public control over such undertakings. No question in economics is more worthy the careful consideration of the thoughtful student who desires to equip himself for honest and intelligent citizenship.

SUMMARY

1. The essential idea in monopoly is unity of action, leading to control of price and other conditions.
2. Monopoly value differs from competitive value in that the supply of monopoly goods is not determined by cost of production.
3. Monopoly price is the price of maximum net revenue. In establishing the supply and the price, the monopolist disregards fixed expenses; hence a fixed tax on monopoly cannot be shifted.
4. Monopoly price is controlled on the side of demand by the wealth and purchasing habits of consumers.
5. It is claimed in favor of public ownership of natural monopolies that the policy diffuses prosperity, is economical, purifies politics, and overthrows injurious social monopolies.

QUESTIONS

1. Define monopoly. Name and define the different classes of monopoly. Mention some monopolies of which you have knowledge, and explain what monopoly advantages they enjoy.
2. Sum up in a brief statement the peculiar properties of natural monopolies of the second class. Mention some monopolies of this class.
3. Show by a numerical illustration and by diagram how monopoly price is determined. Explain the difference between monopoly price and competitive price.
4. Explain differences in the effect of different methods of taxation of monopolies.
5. What advantages are claimed for public ownership of natural monopolies? What dangers are involved in such a policy?
6. State the law of monopoly price.

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CHAPTER IV

MONEY

HAVING discussed at length the fundamental principles on which exchange and value rest, we pass naturally to consider the nature of the complex mechanism by which exchange is effected. At the very centre of this mechanism stands money, the medium of exchange. We have already in our historical study explained how from the custom of making gifts men passed to regular exchange by barter, and how from barter everywhere grew up the regular use of some one thing or some few things as means of making exchanges. With the handicraft stage men had come to use the precious metals for this purpose, and money, in the modern sense of the word, thus became a regular institution.

The Definition of Money. — But what is money? When we come to define the word, we find that usage is by no means uniform. It is often convenient to use the *popular* meaning of the term, according to which money is *anything that passes freely from hand to hand, as a medium of exchange, and is generally received in final discharge of debts*. But there is a narrower conception based upon the functions which money fulfils in the modern economy. In the first place, (1) we find that money everywhere serves as a *medium of exchange*. This, the first function to be developed, is everywhere the principal function of all kinds of money. Our present civilization would be

impossible without money as a medium of exchange. Without such a medium, a man with a horse who wanted a coat would be obliged to hunt for a tailor who wanted a horse, and even after finding him, he might be unable to effect an exchange owing to the inequality in values of the things to be exchanged. In the second place, (2) we find that money serves directly and immediately as a *measure of values*. It is frequently said that money is a "denominator" of values, and usually this means the same thing. This second function springs naturally from the first, for as men make exchanges commonly for some one commodity, that commodity comes to serve as a standard, by which the exchange values of all exchangeable things are measured. That this function may be best fulfilled there is needed a definite, concrete, money unit like our gold dollar, which consists of 25.8 grains of gold and silver, in the proportion of 9 to 1. When, having such a unit, we say that a commodity is worth \$10, we mean that the exchange value of the commodity, or its power of commanding other commodities in exchange, is ten times that of the monetary unit. It sometimes happens that men name values, not in terms of the money actually used, but in terms of some money which has been in earlier days the regular medium of exchange. Thus, throughout our Eastern States one often hears values reckoned in shillings, though it is long since there was any money coined of that denomination. Such money is called "money of account." In the third place, (3) money serves the function of a *standard of deferred payments*. If I wish to sell commodities or services to-day to one who can pay me only at some future time, it is of the utmost importance that we should have some agreed standard

according to which the payment should be made. This function of money is usually facilitated by having a *legal tender quality* attached to it, though such a legal tender quality is by no means necessary to the fulfilling of the function. By the use of the term "legal tender" we mean simply that the legislature has declared that any one having a debt to pay may discharge his debt through the "tender" or offer of the prescribed commodity, and that in case of a suit at law the courts will declare such a tender to have been a legal one. Money has a fourth function, (4) that of serving as a *store or receptacle of value*, so that the value may be transferred from place to place and from time to time. Thus Roman gold money, preserved for two thousand years, has brought its value down to our own time; and gold money taken across the Atlantic bears with it its stored-up value.

And now we may sum up what has gone before in a formal definition of money in the narrower sense of the word. *Money is any commodity that serves as a medium of exchange, as a measure of values, as a standard of deferred payments, and as a store of value.* The meaning given to the word in the following pages will in each case be evident from the context.

Qualities Desirable in the Material of our Money. — Many things have been used as money at one time or another in the world's history : cattle nearly everywhere ; furs, especially in the Northern countries ; oil ; wampum, among the early New Englanders ; tea, at Russian fairs ; tobacco, as in Maryland and Virginia ; all the baser metals ; and the two precious metals, gold and silver. Of all the metals, gold and silver have in civilized nations been found best adapted to money uses. Of the two, gold has shown

a special fitness, and now bids fair to survive as the money metal of the future. Nevertheless, silver is still everywhere used in large quantities, though among advanced nations it generally occupies a subordinate position. The qualities which have given gold and silver their predominance for use as money are precisely those qualities which we may readily recognize as the qualities that all money should have. In the first place, they are very *generally desired, independently of their money use*, since they can be used in the arts as well as for ornament. This fact gives them *security* and *stability* of value. Whenever their value begins to fall, the demand for them for other uses than that of money increases and so prevents the fall in value from being as great as it otherwise would be. Moreover, this stability of value is further secured by the fact that the annual production of these metals bears so small a proportion to the entire amount in existence. Gold and silver are almost imperishable. The gold in coin and bars and the silver in coin, now existing, are estimated to be worth between eight and nine thousand millions of dollars. Compared with this amount, even the present large yearly production of about \$400,000,000 is small. Changes in the value of gold, therefore, so far as these changes are due to conditions affecting the supply, proceed very slowly and gradually. The *high specific value* of the precious metals—that is, their high value in proportion to their weight and bulk—adapts them to use for money by making them a convenient store or receptacle of value. Because of their high specific value, the cost of transporting them from place to place is slight, and therefore their value varies little from place to place. Their *durability* and *indestructibility* are also valuable quali-

ties, while their extreme *divisibility* without loss of value makes it possible to secure a medium of exchange of any desired value, however small. Their *malleability* renders coinage easy, as does also their *homogeneity*, by virtue of which one ounce or pound is always just as valuable as any other ounce or pound. Moreover, the metals and the coins made from them are readily *recognizable* on account of their peculiar ring and their other attributes, and are therefore well adapted to popular use.

Let us now sum up these qualities which are found especially desirable in money: they are (1) *commodity value*, (2) *high specific value*, (3) *stability of value*, (4) *uniformity of value*, (5) *cognizability*, (6) *durability*, (7) *portability*, (8) *malleability*, (9) *homogeneity*.

Coinage. — When the metals first came to be used as a medium of exchange, they passed from hand to hand in their rough state, as "dust," or in nuggets, and the testing of amount and fineness was left to the parties to the exchange. In course of time, private individuals of note occasionally stamped or otherwise certified to the weight or fineness or both, a custom which still obtains in some parts of the world. Gradually, governments took over the work of providing an authorized currency, and systems of regular coinage were developed. In attempting to improve coins, governments have sought first of all to prevent counterfeiting by making the coins of regular and uniform sizes, and by various devices, such as elaborate designs upon the face, milled edges, etc. In all this, governments, though they do not give the original value to the money, do increase the value, by the superior exchangeability which their certification confers upon it.

When the government at its mint coins for private

persons any metal that they may bring to it, the coinage is said to be *on private account* or *free coinage*. The expression "free coinage," therefore, does not have reference to the cost of coining. If the government coins for private persons *without charge*, coinage is not only free but also *gratuitous*. Any charge by the mint for coinage is called *mintage*. If the charge is just sufficient to reimburse the government for the expense of the work, it is called by the French name *brassage*; anything in excess of such a charge is then called *seigniorage*. When the government buys the metal in the market at the market price and coins it, the coinage is said to be *on government account*. If the face value of the money thus coined exceeds the market value of the metal by more than the expense of coinage, the difference constitutes another form of seigniorage. Most industrial nations to-day coin gold on private account and silver on public or government account; in other words, under such governments there is free coinage of gold, but not of silver.

Governments and Money. — From the fact that governments regulate the coinage of money has grown up in the minds of many people the erroneous idea that governments make money. As we have seen, all the functions that make money what it is can be fulfilled and have been fulfilled without the participation of government at all. Governments, therefore, do not make money. But by careful coinage to prevent counterfeiting, by stringent laws against counterfeiting, and by conferring a legal tender power upon the medium of exchange, governments have done much and can do much to increase the currency or exchangeability of money, and hence may give to a certain volume of money a greatly increased value. Gold

and silver would have a considerable value to-day for use in the arts and for ornament, even if they were not used as money at all. They would have a very high value as commodities and as money, even if the government should leave the work of coinage and the work of debt enforcement to private honor. But it cannot be doubted that gold and silver to-day have a higher value than they would have in either of the two cases just assumed.

Prices and the Value of Money. — It is clear, from what has been said concerning money as a measure of value, that a change in the value of the money unit means a change in the general prices of other commodities. To say that a dollar has become cheaper is the same as saying that prices have risen; *i.e.*, it takes more dollars to buy the same commodity. Again, any cause that lowers prices thereby raises the value of money. In brief, prices and the value of money vary inversely.

Prices and the Quantity of Money. — When prices are high, it is evident that a larger volume of the medium of exchange is needed, the rapidity of circulation remaining the same, than when prices are low. When coats are \$10 apiece, it takes a greater quantity of the medium of exchange to buy them than when they are only \$5 apiece. This is a fact about which there is no dispute. But it is a distinct and difficult question whether an increased supply of money can itself make prices high, or whether it is the high prices that call forth the increased supply of money.

The Value of Money. — One of the most difficult and most disputed problems in regard to money is this of the determination of its value. One answer to the problem, known as the "quantity theory," has been generally accepted for over a cen-

tury; but within the last few years this theory has been vigorously combated and does not now receive the general assent to its validity that was formerly granted it.

The Quantity Theory.—It is not easy to state the theory briefly and at the same time accurately, but in a general way it runs as follows: The value of money, and therefore *general prices*, will vary according to the proportion between the demand for money and the supply of it. By the demand for money is meant the number of exchanges to be effected by the use of money. When trade is very brisk, a great many commodities will be produced and exchanged, and to effect the exchanges society will need a great deal of money; in other words, the demand for money will be great. By the supply of money is meant the quantity of money taken in connection with the rapidity of its circulation. Thus, if money circulates more rapidly on the average in one country than in another, a given quantity of money in the first country will result in a greater supply of money than in the second. Now, according to the theory, if the supply of money remains the same during any period of time, while the demand for money increases on account of the increased volume of business, a given quantity of money will exchange for a greater quantity of other goods than before. In other words, the value of money will have risen, and, what is the same thing, the value of commodities, measured in terms of money, will have fallen. Conversely, if the general state of business during any period of time remains the same, while the supply of money increases either through an increase in quantity or through an increase in the rapidity of circulation, the value of money will fall and general prices will rise. To go a step farther, we may say that if the demand for money at any time increases faster than the supply, the result will be a rise in the value of money and a corresponding fall in general prices; while if the supply of money increases faster than the demand, there will be a fall in the value of money and a corresponding rise in general prices.

The Value of Money and the Cost of Production.—Finally, it should be added, the theory holds that in the long run, the

value of money is influenced by the cost of production of the precious metals. Dear money and cheap goods, it is said, will make mining cheaper and more profitable, and hence will tend to increase the output of the precious metals. Conversely, cheap money and dear goods will lessen the incentive to mining, and hence will tend to lessen the supply of money metal or diminish its rate of increase.

Qualifications. — Certain qualifications of the theory call for special comment. Not all transactions are effected by the agency of money. Barter still plays a small part in the work of exchange, and if the amount of money should become very small, barter would increase. Credit is coming to play a larger and larger part in exchanges, and must, therefore, be taken into account in estimating the demand for money. When these facts are taken into account, and when it is further remembered that the theory itself involves so many considerations bearing not only upon the quantity of money and the rapidity of its circulation, but also upon the utility of other goods and the cost of their production, it will be seen that any conclusions based upon the theory must be accepted with the greatest caution, if at all.

General Prices and Prices of Individual Commodities. — It is to be particularly noticed that we have spoken of *general prices*. There is nothing in the theory that would be inconsistent with an increased demand for money coinciding with a rise in the value of some other commodity or group of commodities. It is always happening that while general prices are rising or falling, the value of some commodities is moving in the opposite direction. Even though the quantity of money were very greatly and very rapidly decreased, the difficulties of producing some other commodity might increase more than in proportion, with the result that the value of that commodity, measured in terms of money, would rise instead of falling.

Paper Money. — Hitherto we have been speaking especially of coin money. Another form of money which has been used extensively in modern times is paper money,

which usually consists of written promises to pay on demand, given by banks or by the government. People take these promises to pay and use them as money, because they believe that the promise will be kept; or because they think that others will accept them without question; or because they know that the notes, having been made legal tender, must be accepted for debt unless otherwise expressly stipulated by contract; or because, as is the case with most kinds of paper money, such bills or notes are receivable for taxes. Where confidence in paper money is complete, such money is often preferred to metal money, because more convenient.

If the student will read carefully what is engraved on the different kinds of paper money circulating in the United States, he will readily learn its nature, and will discover that it is of two general kinds: notes of national banks, and notes of the Federal government. The notes issued by the government are of many different kinds. Gold certificates and silver certificates are simply certificates entitling the holder to demand and receive from the government the number of dollars, in gold or silver, printed on the face of the notes. The government always keeps the amount called for by these certificates, dollar for dollar, in its vaults. The so-called "greenbacks," or United States Notes, on the other hand, and the so-called Sherman Notes, or Treasury Notes of 1890, are simply government promises to pay on demand the amounts named on the face of the notes. These are not backed up dollar for dollar by hard money in the Treasury, but are protected by a reserve fund which is supposed to be sufficient to meet all demands as they are made.

Inflation and Contraction.—When the supply of money

is increased to such an extent that prices are generally affected, there is said to be an inflation of the currency. On the other hand, when the supply of money, relatively to the demand, decreases to such an extent that prices in general fall, there is said to be a contraction of the currency. Inflation and contraction of metal money have both occurred on a large scale in the world's history, and there is nothing to prevent a recurrence of the same trouble in the future. Such contraction or inflation is said to be *natural*, because it depends upon the natural conditions surrounding the supply of the precious metals. But the government may also create the evil of inflation by issuing paper money in excessive amounts. In such a case the inflation is *artificial*.

Inflation of the currency, whether natural or artificial, works an injury to large classes of persons. All persons in receipt of fixed and slowly changing money incomes and all persons having money due them on long time contracts, find their purchasing power lessened beyond what they could reasonably have expected. In a word, we may say that *inflation works an undeserved injury to the creditor class in the community.* *On the other hand, contraction works a similar injury to the debtor class.* During periods of falling prices, due to contraction, men who have entered into business engagements on borrowed capital find that the goods which they have to sell, and on the profits from which they must depend for the repayment of the borrowed capital, are constantly falling in price, so that if they return the amount of their debt in money they will really be repaying a much greater amount of general purchasing power.

If inflation is harmful to creditors, and contraction is

harmful to debtors, it is equally true that inflation confers an advantage upon debtors and that contraction confers a similar advantage upon creditors. Such being the case, it is perhaps not to be wondered at that there should at times be many who ask the intervention of government to change the level of prices by a change in the amount of money. If artificial contraction could be produced as easily as artificial inflation, it is possible that the creditor classes in the community would occasionally appeal to the government for the advantage which would accrue to them from such a policy. As it is, such appeals come rather from the debtor class.

The Evils of Artificial Inflation.—Some of the dangers resulting from artificial inflation call for further comment. It is easy to set printing-presses to work, and to issue money in unlimited amounts. This is *apparently* much easier than taxation as a means of paying the expenses of the government, and the temptation to pursue such a policy has often promoted waste and extravagant expenditure. Moreover, only a limited amount of such money can be kept in circulation at its *nominal* or *par* value. The depreciation which results from issuing paper money beyond this limit produces great inconvenience and suffering, since, according to a law known as Gresham's Law, *inferior money regularly drives better money out of circulation*. As a result, prices rise. The rise of prices diminishes the value of all fixed incomes, of interest payments on all debts, and of wages. Inflation of this sort is also a great inconvenience in international trade, because one nation does not recognize the legal tender quality of another nation's paper money, and foreigners lose faith in a paper money which is not kept at a par with the precious

metals. Governments can keep their paper money at par by redeeming it in gold whenever gold is demanded. In such cases paper money is said to be *redeemable*. Redeemable paper money cannot be overissued, and since it has many clear advantages over metal money, it is in many respects good money. Irredeemable paper money is irredeemably bad. Under these circumstances it is evident that governments should issue no paper money at all unless they are sure that such issues will not lead to dishonest inflation.

CHANGES IN THE AMOUNT OF MONEY : BIMETALLISM

The Amount of Money Needed. — The question has often been asked, How much money does a country need? And the answer has sometimes been given: "It makes no difference how much money there is. If the supply is abundant, prices will be high; if the supply is small, prices will be low and the same amount of money will go farther. A little money will do the work as well as a large supply." It is true that there is a relation between the supply of money and its value, although this relation is by no means simple, but rather extremely intricate; and it is true that other things being equal, large supply means small value per piece, and small supply large value; but the conclusion which was drawn from these facts in the above answer does not follow from the facts themselves. When the amount of money is small, barter is extensively practised, with resulting loss and inconvenience to trade. There should certainly be a sufficient stock of money to effect all ordinary transactions of life for which credit instruments are not readily available. Now, one of the most

common business transactions is the payment of wages, and money should therefore exist in such quantities that it will not be too valuable to use for that purpose. In other words, the supply of money should be great enough to make the value of a coin of convenient size not greater than the value of the day's wages of an unskilled laborer. It is even desirable that money should be still cheaper, so that the earnings of such a day's labor may be divided into parts. It is not, however, necessary that money should be cheap enough to enable us to make our smallest purchases with full legal tender money, since in addition to full legal tender money, all countries have subsidiary coins like our fractional parts of a dollar, which are legal tender only for small payments. These subsidiary coins contain less than the proportionate amount of pure metal. In the United States, the subsidiary coins are the half-dollar, quarter-dollar, and the ten-cent pieces. These are legal tender to an amount not exceeding \$10 in any one payment. Besides the subsidiary coinage there is the so-called minor coinage, which in the United States consists of nickels and coppers, and is legal tender in payments up to twenty-five cents.

Fluctuations in the Volume of Money.—The grounds just given for the need of a certain amount of money are not the only considerations of importance in determining how much a country needs. Provided the above requirement has been satisfied, it may make little difference whether the amount of money at any one time be large or small, but it does make a great deal of difference, as we have shown in discussing inflation and contraction, whether the amount of money remains the same or increases or decreases. It is not the "much or little," but

the "more or less" that counts. Obligations have been made in the past which must be met in the present or future. Now, to increase the amount of money, other things remaining the same, raises the value of every debt and adds to the burden of every debtor. It increases the value of notes, mortgages, and railway bonds, and of local, state, and Federal bonds as well. It enriches the few at the expense of the many.

We must not forget, however, that the quantity of money is by no means the only factor in determining the value of the money. So many forces are present in determining general prices that any conclusion based solely upon the relation between the quantity of money and its value must be accepted with the utmost caution. Thus in our day credit is becoming a more and more important instrument of exchange, and we must remember that whatever impairs confidence so shrinks the volume of credit and credit instruments that it produces a stringency in the money market, and thereby raises the value of money.

Bimetallism. — Our discussion of the amount of money needed by a country naturally brings us to the much-debated question of *bimetallism*. To institute a system of bimetallism, three things are necessary: *two metals, free coinage of both at a fixed ratio, and both made legal tender*. Silver and gold have both been generally used as money, the government determining at what ratio the two should be coined. A ratio that has been quite generally used is $15\frac{1}{2}$ to 1, which means that in full legal tender coins under such a system, one ounce of gold is treated as equal in debt-paying power to $15\frac{1}{2}$ ounces of silver. This has been the general European ratio, while that of the United States, established in our first coinage

act of 1792 at 15 to 1, was changed to 16.002 to 1 and then to 15.988 to 1 by Acts of 1834 and 1837.

The Latin Monetary Union. — The European ratio was maintained with free coinage of both metals for about seventy years during the nineteenth century by the action, first of France, and then of a combination of countries, called the *Latin Monetary Union*, in which France, Belgium, Switzerland, and Italy were most prominent. Under their system, every one who had gold or silver in any form could have it changed to money at the established ratio of coinage.

Demonetization. — About 1873, however, Germany, which had before given free coinage only to silver, decided to change to a gold basis, and threw upon the markets of the world an immense amount of silver at the same time that she increased the demand for gold. In the same year, our own country dropped the silver dollar from the list of coins to be struck at the mint, thus putting us on the basis of gold monometallism, although, as a matter of fact, no silver dollars had been coined for years. Because of the rapid decline in the value of silver, the Latin Union also soon after suspended its free coinage. To add to the confusion, large discoveries of silver at about the same time brought about a great and rapid increase of the supply. The result of these changes was a violent fluctuation from the old market ratio between the two metals, silver falling so much in value as measured by gold that to-day it requires about thirty-eight ounces of silver to purchase one of gold. In other words, the market ratio has changed from near the old mint ratio of $15\frac{1}{2}$ to 1 to a ratio of about 38 to 1.

Results of Monetary Changes. — The changes which we

have described naturally increased the value of money, and thus incidentally all debts, and produced great distress. But the increase in the debts was only a part of the mischief. South America and the Oriental countries being on a silver basis, trade had easily been carried on with them as long as gold and silver readily exchanged at an established ratio ; but when the ratio began to fluctuate, an uncertain and disturbing element was introduced into trade, rendering it highly speculative, and therefore on the whole less profitable to the world. The merchant in Liverpool who sold goods to a merchant in India would agree to receive in exchange a fixed sum of silver money ; but, as it was necessary for the English merchant to exchange this silver for gold, a fall in the value of silver during the progress of the transaction might bankrupt him. Under these conditions exportation of manufactured goods to the Orient was impeded, and to the same extent production in India and China was artificially stimulated.

These, in brief, are some of the difficulties that are believed by many to have resulted in great measure from the general demonetization of silver. Bimetallism has been proposed as a remedy. Under bimetallism government would coin at a fixed ratio all gold and silver that anybody desired to have coined ; in other words, government would coin gold and silver on private account. Bimetallic coinage by one country alone is called *national bimetallism*. It is generally agreed among economists to-day that national bimetallism is utterly impracticable, because, according to their view, no country is commercially powerful enough to furnish such a demand for both metals as would be necessary to maintain parity of value at any coinage ratio yet proposed. If, on the other hand,

the proposed ratio could not be maintained, then other countries might send to it all their silver and take away its gold, by the simple action of Gresham's Law, thus practically reducing the country to a silver basis.

With *international bimetallism*, however, which means bimetallism based on an agreement like that of the Latin Monetary Union before 1874, the case is quite different. Economists were at one time inclined to favor such a monetary policy, and even to-day there are in Europe and America some economists who believe such international action feasible and desirable. They believe that if, for instance, England, the United States, Germany, and France should enter into such an agreement, those countries could maintain the ratio. International bimetallists remind us that gold and silver are used principally for money, and that owners of gold and silver would be obliged by the international agreement either to have the metal coined at the government ratio, or to sell it in the market for use in the arts. But the arts absorb only a relatively small portion of the annual product, and a very much smaller portion of the total existing supply. It is therefore maintained that governments are in the position of monopolists, and by agreement could maintain a fixed coinage ratio. Moreover, international bimetallists declare that as a result of such action greater justice would be done to creditors and debtors alike, and that the world's business would be increased because of the greater convenience of commerce between gold-using and silver-using countries.

RECENT MONETARY HISTORY

The Bland-Allison Act of 1878.—No great State now coins both metals freely, but the government of the United

States, as well as others, still provides a place for silver in its currency. By the Bland-Allison Act of 1878, the Secretary of the Treasury was required to coin not less than \$2,000,000 worth of silver nor more than \$4,000,000 worth per month. Under the act there were coined, down to August 12, 1890, when the law was superseded, 378,166,793 silver dollars, or over 2,500,000 per month. In order to find a place for the circulation of the silver, *silver certificates* were issued, and these, being more convenient to carry, circulated among the people, while the silver dollars upon which they were issued remained in the Treasury. During the twelve years in which the Bland-Allison Act was in force, silver continued to fall in value. This depreciation suggested two opposite remedies. Some, attributing the fall to the limitation upon silver coinage, urged free coinage as a cure; others, believing free coinage impracticable and the existing condition dangerous, urged entire suspension.

The Sherman Act of 1890.—After a long struggle in Congress, a compromise bill was passed, known as the Sherman Act, by which the Secretary of the Treasury was authorized to purchase 4,500,000 *ounces* of silver a month (so long as the market price did not exceed \$1⁴ for 371 $\frac{1}{2}$ grains of pure silver) paying therefor with legal tender notes of the Treasury. It was soon found that the Sherman Act did not put an end to the depreciation of silver. Moreover, it was generally believed that the purchases under the Act formed a great and increasing menace to the security of our currency.

Repeal of the Sherman Act.—For two or three years there were heavy exportations of gold from the United States, and as a result it was commonly claimed that if

the Sherman Act were not soon repealed, gold exports would continue until the United States would be driven to a silver basis. During this same critical period, the Indian mint was closed to free coinage of silver, and the price of that metal fell within three days from 82 cents to 67 cents an ounce. Added to this was the fact that the revenues of the United States fell off until they were less than current expenditures, thus creating a fiscal deficit. This combination of circumstances led to a special session of Congress in the late summer of 1893, which, after a bitter fight, repealed the purchasing clause of the Sherman Act.

The Currency Act of 1900. — Between 1893 and 1900 the monetary situation gradually improved, although for two or three years the United States, in order to protect the currency, was driven to repeated issues of bonds under very humiliating circumstances. The defeat of the Democratic candidate for President in 1896, who ran on a platform declaring for "the free and unlimited coinage of silver and gold at the ratio of 16 to 1, by the independent action of the United States," paved the way for a new currency bill which was passed by Congress March 14, 1900. This act expressly declares that the gold dollar shall be the standard of value in the United States, and that all other kinds of money are to be maintained at a parity with gold. It further requires the United States Treasurer to maintain a special reserve fund for the redemption of United States notes. This fund must in all cases amount to \$150,000,000 in gold or in gold and redeemed notes. If the amount of gold falls below \$100,000,000, and the redeemed notes which constitute the remainder of the fund cannot at the time be exchanged

for gold in the general treasury, short time *gold* bonds may be issued and sold to make up the deficiency in the reserve. As to silver coinage, the act calls for the coinage of silver dollars from the already existing stock of silver, until the number of such dollars shall equal the amount represented by the "Treasury notes of 1890," issued to pay for the silver. These silver dollars, or the corresponding silver certificates, are to be paid out in redemption of the "Sherman notes," as fast as such notes are presented at the Treasury. When all the Sherman notes shall have been redeemed, the remainder of the silver bullion purchased by the government—representing the seigniorage from the silver coinage—is to be coined into subsidiary silver.

It will be seen, therefore, that by the terms of this recent monetary legislation, strong provision has been made for securing parity of all parts of our money, and for strengthening the position of the United States as a country of gold monometallism.

International Monetary Conferences.—The strong desire for international bimetallism which was felt both by economic theorists of repute and by practical statesmen in many lands has led to repeated monetary conferences, which have usually received the vigorous support of the United States. The most noteworthy of these were the Paris Conference of 1878 and the Brussels Conference of 1892. Nothing whatever has come of these expert discussions. Inertia and the quiet opposition of a great part of the business world have been more potent than the activity of the bimetallists. England, as a great creditor nation, has led the opposition to all plans for international action.

Whatever we may think of the economic arguments of the international bimetallists, we must remember that a great political obstacle stands in the way of the fruition of their hopes. The monetary history of the last twenty-five years seems to show conclusively that international bimetallism is losing rather than gaining in favor; and therefore those who favor international bimetallism, recognizing the hopelessness of attaining their ideal, may well afford to unite with their former opponents in securing the best monetary system that offers hope of realization.

SUMMARY

1. Money serves as a medium of exchange, a measure of values, a standard of deferred payments, and a store of value.
2. The precious metals have certain desirable qualities that have given them first place for money use.
3. Governments do not create, but they do increase the value of money.
4. The general theory of competitive value applies to the value of money, or general prices.
5. Stability, the great desideratum in money, is opposed to inflation and contraction.
6. Bimetallism has been advocated as a policy to secure stability; but the recent tendency has been away from bimetallism to gold monometallism.

QUESTIONS

1. Name the qualities desirable in money. Mention different things that have been used as money.
2. What is coinage? Free coinage? Gratuitous coinage? Brassage? Seigniorage?
3. Discuss the relation of government to money.
4. Discuss the quantity theory of the value of money.
5. What are the advantages of paper money? Its dangers? From an examination of actual paper money, name and describe the different kinds that are used in the United States.

6. What are the evils of inflation? Of contraction? How much money does a country need?
7. What is bimetallism? International bimetallism? What was the Latin Monetary Union?
8. What was the Bland-Allison Act? The Sherman Act? The Act of 1893? The Act of 1900?
9. What international monetary conferences have been held, and what has been their result?

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CHAPTER V

CREDIT AND BANKING

What Credit Is.—We have seen the immense development in exchange that has been made possible by the use of money,—a development resulting in the division and organization of labor and a revolution of the whole economic life. Yet money alone as a medium of exchange is entirely inadequate to explain the magnitude of present commercial transactions. Great as is its advantage over barter, money is too clumsy an instrument for many modern purposes. While it is by no means dispensed with in our own day, money is primarily characteristic of the economic stage preceding our own. The characteristic instrument of exchange in our day is not money, but credit.

Like so many other terms which economics borrows from the language of everyday life, the word "credit" has many meanings and shades of meaning. One of the commonest of these is indicated when we say that a man's credit is good or that he has good credit, by which we mean that he has the reputation of paying his debts and has the ability to do so, and that therefore other men are willing to sell him goods and to wait for their pay until a future period. Another important meaning of the word refers to the character, not of the man, but of the transaction itself. The transfer of goods with the expectation of future payment is a credit transaction. This is the idea

which we embody in the word "credit" in the science of economics. We may therefore define the term as follows: *A credit transaction is a transfer of goods for a promise of a future equivalent.* First, it should be noticed that the transaction is partly present and partly future, or, in other words, credit contains an *element of time*. In the second place, it is to be remarked that the transaction involves *confidence* either (a) in the *character and resources of the borrower* or (b) in the *sufficiency and security of goods* which he may have *pledged* for the fulfilment of his promise. A third factor frequently present is a written *evidence of indebtedness*, given by the borrower to the lender. This writing constitutes the *instrument of credit*.

The Mechanism of Credit.—The mechanism of credit, or the machinery by which credit operations are carried on, consists of two parts: (I) the *instruments of credit*,—the evidences of indebtedness,—such as checks, drafts, notes, bonds, etc.; and (II), the *institutions of credit*, consisting principally of banks and clearing-houses.

I. *Instruments of Credit.*—Among the instruments of credit the simplest and most extensively used is the (1) check. *A check is an order upon a bank by an individual or company requiring the payment of a certain sum of money to the order of a person named or to the holder of the check.* In this form of credit the element of time plays a very small part. If money were paid instead of a check, the person receiving it would be likely to deposit it in a bank. Receiving a check, he carries it to the bank. The element of credit here prominent is the trust or confidence involved, the confidence that the check will be honored by the bank upon which it is drawn.

Bankers also use checks. When one banker gives a

check on another, the instrument is usually called a (2) *draft*. Another form of draft arises when a bank or a company or an individual orders the payment of a sum of money to a bank. When, however, the drawer and drawee of a draft live in different countries, the instrument is often called a *bill of exchange*. Both these terms are so loosely and variously used that the reader must usually judge a writer's meaning from the context.

A third form of instruments of credit consists of (3) *notes*, which are usually *promises to pay a certain sum of money for value received, under conditions named, on demand or at the expiration of a certain period*. Here the time element is important, and is recognized by the payment of interest. Such notes are of three general kinds, according to the character of the maker. (a) Individuals and companies issue *promissory notes* for payment on demand or within a certain time. (b) Banks in most countries issue notes which commonly pass as money and which have a different legal standing than belongs to the notes of individuals. Such are the national bank notes of the United States. (c) Governments themselves often issue notes such as those which we have already discussed in treating of the subject of paper money. Bank notes and government notes do not usually bear interest.

Ordinary instruments of credit do not circulate freely like money, but are intended to be used primarily in one transaction ; yet they are by no means confined to this. Thus checks and drafts often pass through many hands, and notes are often transferred once, twice, or many times. With bank notes and government notes, however, which circulate as money, the case is quite different. These are (1) intended for general use ; (2) they are always drawn

to bearer; (3) they are issued in fixed and convenient denominations; and (4) the credit of the issuing agent is usually taken as a matter of course.

Credit transactions between individuals usually take one of the two following forms: (1) usually a person buying goods promises to pay the person from whom the goods are bought; but, instead, (2) the seller may "draw on" the buyer by means of a *bill of exchange* which in such cases is also sometimes called a *draft*, if both parties to the exchange reside in the same country. Let us suppose that A is the seller and B a buyer in a distant place. A writes an order upon B to pay to him or to a third party, C, the amount of the debt. If B on receipt of the order acknowledges the debt and is ready to agree to pay it, he writes *accept* on the bill and signs his name. This act is called an *acceptance*. The instrument thus becomes legally binding upon the acceptor.

Checks and notes may be *transferred* by *indorsement*. The payee, by writing his name on the back of the instrument, orders the payment of the money to another person whom he names in writing. By thus indorsing the instrument, he becomes responsible for its payment in case the one who precedes him in responsibility fails to make the payment. The person to whom such an instrument is indorsed, or the *indorsee*, may also in turn become an *indorser*, in which case he also assumes similar responsibility.

Book credit (4) is another form of credit which is extensively used, especially in retail trade. When goods are sold, a record is kept, or, as we ordinarily say, the goods are "charged," a bill for the amount being sent at a later time. Where two persons mutually grant book credit, as

is often the case among merchants in small places, only balances need be paid in money on settling day.

II. *Institutions of Credit: Banks and Clearing-houses.*

— Bankers have already been mentioned as middlemen in credit transactions. They are sometimes called dealers in credits, and indeed there is little that they do which is not in one way or another connected with credit. But banks are not mere agents. They have a capital of their own which serves as a guarantee fund, and they receive money which customers deposit with them. Under legal regulation they mingle the deposits with their own capital and have exclusive control over it all. They are debtors of their depositors, and creditors of those to whom they lend money. Their source of profit is not exclusively nor even chiefly their own capital, but rather the funds deposited with them. As a rule, commercial banks either pay no interest on deposits or they pay interest at a rate considerably lower than that charged on money loaned, the difference constituting their chief source of profit.

In earlier times nearly all banks in the United States issued notes which circulated as money. Indeed, such note issues were commonly regarded as the principal business of banks. Now only national banks are able profitably to issue notes, and they are required to deposit bonds at Washington as security for the circulation, besides paying a special tax for the privilege. In nearly all civilized countries, the power of banks to issue circulating notes has been greatly restricted, and the number of banks that find a source of profit in such issue is constantly diminishing.

It would take us too far afield were we to enter upon a complete discussion of the various kinds of banks and

their precise differences. Briefly, we may say that any institution that (*a*) *discounts* notes or other forms of commercial paper, and (*b*) *receives and holds deposits*, is a commercial bank, whether or not it issues notes, and whether or not it is incorporated by law. When the word "bank" is used alone it always refers to such an institution. Savings banks are therefore not banks in the legal sense of the word. The three classes of regular banks in the United States are our national banks, numbering about 4500; state banks, which with trust companies number about 4500; and private or unincorporated banks, which also probably number about 4000. Trust companies, which are of recent development and of rapidly growing importance, are incorporated institutions differing little from banks. In fact, many bankers insist that the business done by the larger proportion of the great trust companies is a strictly banking business, and that this fact should be kept in mind by legislators and administrators. At present such companies seem to enjoy most of the privileges granted to incorporated banks, without being compelled to observe the restrictions by which banks, as the result of experience, have been surrounded. Within the last decade this condition of comparative irresponsibility has made it possible for such companies to invest in doubtful securities and thus to help in the "flotation" of unsound industrial enterprises. It would seem to be advisable that trust companies should be subjected to supervision at least as rigorous as that which is provided for national banks by the Federal law.

The nature of banking operations will be made clearer by an examination of the following statement of the condition of a national bank:—

RESOURCES	LIABILITIES
Loans and discounts	\$209,682.15
Overdrafts	561.08
U. S. bonds	12,500.00
Stocks, securities, etc.	2,750.00
Bank building furniture, etc.	7,175.00
Due from approved reserve agents	71,709.49
Checks and other cash items	1,346.55
Bills of other national banks	1,500.00
Fractional currency, nickels and cents	191.37
Specie	14,659.95
Legal tender notes	4,500.00
Redemption fund with U. S. treasurer	562.50
	<hr/>
	\$327,138.89
	\$327,138.89

Notice that on the liability side the first three items are liabilities in a different sense from the last two: for the capital stock, surplus, and profits the bank is liable to its stock-holders; for circulating notes and deposits, it is liable to outside persons. Also, notice the relation between the total amount of cash on hand and the deposits, and compare the total investment of the stock-holders with the amount of loans and discounts.

Clearing-houses.—Clearing-houses were originally contrived by the employees of banks with the object of saving time and labor. Banks in a city have continual dealings with one another. A regular customer of a bank deposits with it all the checks that he receives, no matter on what bank they may have been drawn. It therefore

happens that every bank in any of our cities receives checks every day drawn on the other banks, while the other banks receive checks on it. Formerly there was continual running back and forth among banks to balance their accounts. Now the representatives of all the banks in clearing-house cities meet daily in the clearing-house and exchange their obligations, only the differences between the sums due being paid. These differences are paid by the debtor banks to the clearing-house, and by the clearing-house in turn to the creditor banks.

Clearing-house statistics show the inadequacy of money alone to do the business of the modern industrial world. The total transactions of the clearing-houses in the cities of the United States for the year ending September 30, 1903, amounted to \$114,068,837,569, or about forty-two times as much as all the money in the country, bank notes included; for the money in the country August 1, 1902, in the United States Treasury and in circulation, was only \$2,695,440,174. The small proportion of actual money transfers necessary in paying clearing-house balances illustrates the same fact. Thus in the year ending September 30, 1903, the New York Clearing-house, which includes 56 banks in its membership, cleared transactions amounting to \$70,833,655,940, by making money payments for total balances of only \$3,315,516,487. The average daily clearings were \$233,005,447, while the average daily balances paid in money amounted to only \$10,906,304, so that the balances were only 4.68 per cent of the clearings.

The Advantages of Credit. — It remains for us to sum up in separate paragraphs the advantages and evils which attend the great development of credit in modern industrial society.

1. *Credit saves time and labor* by furnishing a more perfect and convenient means of payment in large sums and between distant places than is furnished by the precious metals. Thus in international trade, relatively small sums of money have to be sent from one country to another, only balances being paid in money. If certain London merchants owe New York merchants £1,000,000 for cotton shipped, while the same or other New York merchants owe the same or other London merchants £1,000,000 for importations from Europe, it is obvious that no money need leave either country. The London merchants may send orders to their New York debtors to pay their New York creditors. This is the simplest kind of cancellation of indebtedness. In actual life, the process is more complex, but the underlying principle is the same. New York merchants owe London merchants; Paris merchants owe New York merchants; London merchants owe Paris merchants, etc. By exchanging orders among the different debtors and creditors a large part of the total debts may always be paid without the shipment of money.

2. *Credit saves capital* by taking the place of corresponding amounts of gold and silver. In this way society is enabled to employ a larger portion of the precious metals for other useful purposes.

3. *Credit renders capital more productive.* Under our credit system he who possesses capital, but is unable to use it, may transfer it for a compensation to another person who can employ it productively, and thus both debtor and creditor, as well as the public economy, are benefited. Other things being equal, capital is loaned to those who will pay the most for it, and under normal conditions these

must be the ones who can employ it most productively. There are evidently two sides to this advantage. On the one hand, as we have just said, credit enables those who have capital, but who are without the disposition or ability to use it productively, so to place their capital that they themselves receive benefit while furthering social production. On the other hand, credit enables those who have great business qualifications, but who have inadequate capital or no capital at all, to employ their energies and talents for their own benefit in furthering the welfare of society. In many cases credit brings together capital without directive power and directive power without capital, and thus serves to unite capital and labor.

4. *Credit furthers the accumulation of capital* by gathering together the very smallest sums, as, for instance, in savings banks. Such small sums, forming in the aggregate large masses of capital, are loaned out by those who are responsible for them to joint-stock companies and other productive concerns. In this way the *capital itself is concentrated while its returns are scattered* widely among the people. Moreover, credit furthers the accumulation of capital by promoting thrift, since it both helps and encourages men to provide for emergencies and for old age. This is particularly the case with institutions that supply capital to the poorer classes, and with American building associations, which furnish the same classes with capital for the construction of homes.

Evils of Credit.—But we must not overlook the dark side of our credit economy. Without expanding upon the evils of credit we may mention some of the more important of them as follows:—

1. *Credit frequently encourages extravagance*, which is a fruitful source of fraud and embezzlement. Men who are granted credit often overrun reasonable bounds, and then in their despair resort to desperate expedients in the hope of release.

2. *Credit prompts precarious speculation*. Those who speculate with the capital of other people are proverbially careless. Our entire land is strewn with the ruins of businesses wrecked by men who have mismanaged the property which unwise credit gave into their hands. When such management assumes unusually large proportions, credit becomes a powerful factor in precipitating a disastrous panic and crisis.

Some writers have claimed that all *productive credit*—credit used in carrying on a business—is good, and that the evils of credit arise only in connection with *consumptive credit*, that is, credit which enables one to spend money for personal gratification; but while there is a modicum of truth underlying this distinction, the line cannot be so sharply drawn. Consumptive credit does frequently lead to extravagance, but it also enables many a young man to develop personal powers and to become a great artist or scholar; on the other hand, productive credit, while normally resulting in great advantages to society, sometimes opens the way to putting business at the mercy of ignorance, incompetence, and dishonesty.

We may conclude the matter by saying that we should do all within our power as a society to preserve the advantages, while reducing the evils of credit to a minimum. It is a hopeful indication of progress in this direction that more and more attention is being given by the public to a demand for full publicity in the management of great

business undertakings. Such publicity will go far toward obviating one of the most apparent and general of the abuses of credit which we have enumerated.

SUMMARY

1. Money having proved inadequate to the needs of modern exchange, credit has displaced it for ordinary large transactions.
2. Credit means the transfer of goods in the present for a promise of an equivalent amount of goods to be repaid at a future time. Hence there are two fundamental elements to be distinguished: time and confidence.
3. The chief instruments of credit are checks, drafts, and bills of exchange, promissory notes, bank notes, and government notes, and "book accounts."
4. Banks are institutions for facilitating credit transactions; clearing-houses are institutions for facilitating transfers of credit among banks.
5. Credit saves the time and labor involved in money payments; it saves capital, promotes the accumulation of capital, and makes a given amount of capital more productive.
6. Credit often leads to speculation and fraud; it encourages extravagance and waste in public and private consumption.

QUESTIONS

1. What different meanings has the word "credit"? In which sense is it most often used in economics?
2. In what cases is there but little time advantage in credit? Mention cases in which the element of confidence is very slight.
3. What is a check? A bill of exchange? A bank draft? What is a note? A bond? What is the advantage of a note? Of a check?
4. What effect does credit have upon the productiveness of capital? Why? Upon the accumulation of capital? How? What connection have these two results?
5. What are the evils of credit? How do the evils to society compare with the evils to individuals?

6. What is a bank? What functions are necessary to the idea of a bank? What other function or functions do some banks exercise? How do banks reap a profit? Why is this proper and legitimate?
7. What advantages has bank money? What dangers? What is the tendency to-day regarding bank-note issue?
8. What is a clearing-house? About what is the extent of transactions through the clearing-houses of the country? How does this compare with the amount of money in circulation? What bearing has this fact upon the relative importance of money and credit in modern industry? How are balances paid? To whom are the balances first paid?

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CHAPTER VI

INTERNATIONAL TRADE

THE subject of international trade calls for somewhat extended study before we leave the division of transfers or exchange. Nations do not live to themselves alone. More and more with the passing years trade is overleaping narrow local limits and is becoming world-wide in extent. International trade is always in the last analysis trade between pairs of individuals, and is in many respects precisely similar to trade among individuals in a single community or country. But there are certain features in which it differs so materially from trade within a narrower area or within a single political unit that it calls for special treatment.

In the present chapter we shall first study the nature of international trade, and shall conclude with a discussion of the restrictions, usually in the form of tariff duties, laid by nations upon international commerce.

I. THE NATURE OF INTERNATIONAL TRADE

An Exchange of Goods for Money.— Whenever an individual in one country sells goods to an individual in another country, he sells the goods for money just as he would to a person in his own community. But owing to the difficulty and risk of sending money back and forth in payment of individual claims resulting from innumerable sales and purchases, great banking houses have developed

a system by which the greater part of such transactions are effected without the use of money at all. The system of international exchange is quite like that of the clearing-house, which has already been explained. When an American exporter sends goods to an English importer, there are two methods by which payment may be made. More commonly the exporter "draws on" the importer for the agreed amount; that is, he writes an order upon the exporter to pay, usually at some specified place, the amount named in the face of the bill. This bill of exchange, attached to a bill of lading of the goods and other documents, the exporter sells to a bank, which thus purchases a right to have a certain amount of money paid at its order in England. The other method of closing such a transaction is for the English importer to go to an English bank and there purchase a draft drawn by the bank upon an American bank in favor of the American exporter. In either case, if the transaction stood alone, money would have to cross the ocean to pay for the goods. But, as a matter of fact, English exporters are at the same time shipping goods to American importers, and are thus securing counter claims upon Americans. It is evident that if the claims upon the one side equal the claims upon the other, no money need be sent, provided the various claims are brought together and cancelled. It is precisely this function that banking houses doing an international business perform. They buy bills from exporters and sell drafts to importers.

We have here assumed that only two countries are parties to the international exchange. When we consider the case of several nations or of all, there is no difference except in the greater complexity. Thus it is evident that

if A in New York owes a sum of money to B in London, while C in London owes the same amount to D in Paris, and E in Paris in turn owes the same amount to F in New York, the debts of all may be settled without a cent of money leaving any one of the countries.

The Rate of Exchange. — An English gold pound equals by weight \$4.866 in American money. Hence, in the above case, if bankers made no charge for their services, the rate of exchange between New York and London would stand at £1 for \$4.866, or exchange would be *at par*. Let us see now some of the forces which determine how far above or below par the rate may go.

The Balance of Trade. — Assuming for the moment that the only transactions affecting international exchange are the exports and imports of commodities, we can see that if at any time one country — America, for example — is importing more goods from England than it is exporting, the balance of trade is for the time against that country. In such a state of things, New York banks will have many demands for drafts upon London and few offerings of bills on London. Conversely, London banks will have many offerings of bills on New York, but few demands for drafts upon New York.

But it is the purpose of banks in both places to make drafts balance bills in order to avoid sending specie in payment. Hence the New York banks will seek to discourage the demand for drafts on London by charging a higher price for them, and will at the same time try to encourage the offering of bills by paying a higher price for them. London banks will in the same way lower the price offered for bills on New York and will sell more cheaply drafts drawn by them on New York. Exchange is then said to be "against" New York and "in favor of" London. A New Yorker wishing to meet a debt of £1 in London will be obliged to pay for the necessary draft more than \$4.866. He will have to pay a *premium*. A Lon-

don debtor at the same time can extinguish a debt in New York by the payment of less than £1 for each \$4.866 of the debt.

The "Specie Point."—Neither New York nor London bankers will charge such a rate for drafts or pay such a rate for bills as will make it profitable for individual debtors to send the specie or bullion instead of appealing to the banks. But there are even narrower limits to fluctuations in the rate of exchange. The bankers themselves naturally have the best facilities for making shipments of money, and as the rate of exchange rises or falls, a point is reached at which it will be more profitable for the banks to send the metal in settlement of outstanding balances. This point is called the "specie point." As the bankers' cost of shipment, including freight, insurance, packing, loss of interest, etc., is now about two cents per English gold pound on average shipments, the specie points in English American exchange stand at about \$4.846 and \$4.886. In other words, gold begins to go out from New York when exchange rises above \$4.886, and begins to leave London for New York when exchange falls below \$4.846.

Again we must remind the student that for the sake of simplicity we have assumed trade to be confined to the two countries mentioned. When the case of international trade in general is taken into account, the subject becomes too complicated for brief explanation. We may simply say then that the rate of exchange between New York and London, London and Paris, Paris and Berlin, etc., is affected not only by the volume and balance of trade between the two countries, but also by the volume and direction of trade balances in the trade of the other nations.

The Limit to Metal Exportation.—There is also another natural limit to fluctuations in the rate of exchange and to the exportation of the money metal. The general principle may be illustrated by supposing the case of two nations, neither of which possesses mines. Let us assume again that their transactions are limited to the mutual purchase and sale of goods. What happens when the balance of trade goes for a time

against one country or the other? The rate of exchange having reached and passed the specie point, gold shipments begin from country A, the country of large imports, to country B, the country of large exports. Other industrial conditions remaining the same, A, having less money than before, will become a country of lower general prices; while in B, with its increased stock of metal, prices will rise. What results? A at once becomes a weaker seller and a stronger buyer; while B, conversely, becomes a weaker buyer and a stronger seller. But increased importations from B and decreased exportations to B will readjust the trade relations to their old position, metal shipments will cease, and the rate of exchange will again approach parity.

The actual conditions are infinitely more complex. Trade is not confined to two nations; international balances depend upon other things as well as upon the transfers of goods; the currency of different nations is not in all cases of equal stability or honesty; many nations are themselves producers and therefore natural exporters of gold. Still it remains true that through the operation of such natural causes as we have just described, the various debts of one nation to the world and the debts of the world to that nation do in the long run tend strongly to balance; and the money metals are distributed among the nations according to their monetary needs.

International Values.—The values at which goods exchange in international trade depend upon the same fundamental principles that have been explained in the chapter on value, but these values are especially influenced by the fact that labor and capital do not usually flow so freely from one country to another as they do between different parts of the same country.

Let us suppose that in one of two countries just beginning to trade with each other it is found that the greatest satisfaction of wants results when raw cotton and manufactured silk are produced by an expenditure of labor indicated respectively by 15 cents a pound and 50 cents a yard, but that in the second country it is just worth while to produce the same com-

modities at 10 cents a pound and 75 cents a yard respectively. Assuming these to be the only two commodities to be exchanged and ignoring the cost of transportation, we may suppose matters to proceed as follows: Silk will be sent from the first country to the second in exchange for cotton. The price of the silk will be somewhere between 50 and 75 cents; that of the cotton between 10 and 15 cents. The precise value in each case will be such that in the long run the values of the cotton and silk exchanged will be equal. Suppose it were not so; imagine that \$1,000,000 worth of silk were being exported from the first country and only \$500,000 worth of cotton imported. At first the balance might be paid in gold, but the drain of gold from the second country would so lower prices there as to discourage the further importation of silk, and the influx of gold into the first country would so raise prices as to encourage the importation of cotton into that country. This would continue until an equilibrium was established.

Even if one country had greater natural advantages for the production of all commodities, trade would still take place between the nations, since the first country could satisfy its wants most economically by confining its efforts to the production of goods in which its natural advantages gave it the greatest superiority. This can be seen also in the case of individuals. If a man's services to society as a lawyer are so valuable that he can in his working hours earn \$10 an hour, both he himself and society will suffer if he spends any of his time in doing his own typewriting, though he may be able to do the work more rapidly than a regular typewriter whom he can employ for \$4 a day. Many an able man lessens his efficiency by failing to observe the principle here indicated.

The Advantages of International Trade. — By an old theory of a "favorable balance of trade" it was held that the advantage of international commerce lay in securing an excess of exports over imports, that the balance might be paid in "treasure," or money. This idea is similar to

the old opinion that trade between two individuals could benefit one only at the expense of the other. Now it is generally seen that countries can sell goods only by buying goods, and that a continuing excess of exports defeats itself by raising prices in the exporting country. The real advantage in international trade is that (1) *it enables every country to enjoy goods which it does not itself produce*; and (2) *enables each country to secure a maximum of satisfaction by devoting its resources and energies to the forms of production in which it enjoys the greatest relative advantages.*

II. RESTRICTIONS ON INTERNATIONAL TRADE

Objects of the Restriction.—Nations have always laid restrictions upon international commerce, and an examination of the history of such restrictions discloses at least four motives for imposing them. (1) In the first place, we may note that ancient nations, the Greeks, the Hebrews, and others, *dreaded contact with foreigners*, and attempted by restrictions on international trade to reduce such contact to a minimum. (2) A second very common cause of restriction has been the desire to *make international trade a source of revenue*. Sometimes a tax has been laid upon both exports and imports. England to-day taxes only imports, and taxes these with a view to securing the greatest possible revenue. (3) In the third place, tariffs have at times been laid with the purpose of securing *a supply of the precious metals*, through a so-called “favorable balance of trade.” No enlightened nation now pursues this course. (4) Finally, many nations to-day regulate international commerce with the object of *weakening foreign competition*, in order that home producers

may be encouraged and supported. Restriction for this purpose usually takes the form of laying duties upon imported commodities of a kind that can be produced in the home country. Such taxes are called protective. Collectively they form what is called a protective tariff. Home producers are said to be thus "protected" against foreign competitors. Of course in some cases it is possible that more than one or even all of the objects of regulation that have been mentioned may be sought by the country which thus regulates its commerce with other nations.

Protectionism. — The general subject of protection is so vast that a complete discussion of it would fill volumes. We must be content here to study briefly the chief points in controversy between advocates and opponents of the system; to give attention to certain general considerations of importance; and to suggest what desirable changes may be made in the American tariff system upon which all should unite.

Argument of Protectionists. — Protectionists argue that the system which they favor *promotes nationalism*, or a strong sense of national unity. Domestic trade, they say, should be encouraged because it draws the citizens of a country together, while international trade is cosmopolitan and tends rather to the separation of citizens one from another. It is argued that nationality and a strong national feeling depend upon a sense of national strength and independence, which can exist only when the nation has widely diversified industrial interests, and therefore protective duties should be levied to encourage such a *diversification of industry*. American protectionists insist that in a new country there exist many great natural ad-

vantages of which the inhabitants cannot avail themselves unless they are protected, at least temporarily, from the competition of foreign producers who have the advantage of long experience. The (1) *diversified-natural-industry* argument and the (2) *protection-to-infant-industries* argument — the ones upon which protectionists most strongly insist — are thus seen to be supplementary. Protectionists urge that the older nations, by reason of their acquired skill and capital, can destroy in their infancy any new pursuits that a younger rival is seeking to establish. Closely connected with this argument is another based upon (3) *military grounds*. Industrial self-sufficiency is a great aid to a nation in times of war, because such a condition lessens the distress due to naval disasters. Hence, it is claimed that nations at peace should prepare for war by protecting, nursing, and fostering the widest possible range of domestic industries. (4) The *home market* is also claimed to be *superior* because more secure — less liable to the shock of war or international complications. (5) Special advantages are said by the protectionists to be conferred by their system upon farmers, who are *saved the expense of long shipment* when they have a sufficient market for their crops among home manufacturers. It has even been maintained by one American protectionist (6) that no nation can be permanently prosperous unless the elements taken from the soil are returned to it in the form of manure and other fertilizers, and that this *process of repair is possible* only *when agricultural products are consumed at home*. Another common protectionist argument, which has been much used since the labor movement first became prominent, is (7) that the protective tariff has been *the cause of high wages paid to American labor*, and that it will be

necessary to maintain the protective tariff if we would maintain the high wages.

Arguments of Advocates of Free Trade. — In opposition to protection it is frequently alleged (1) that protective tariffs are a *violation of the "natural right"* of every man to buy and sell wherever he will, untrammelled by human laws. We may dismiss this "natural-right" argument at once as "dogmatism in disguise." It is a question-begging argument, since, in the use of the word "natural," it assumes the very thing that must be proved before the argument can have weight. All history, and the opinions of all great modern thinkers, are against such an assumption. It would be well if this argument were heard more rarely.

Again, (2) it has been claimed that protective tariffs in the United States are *unconstitutional*. But this argument is idle and futile. The opinions of our best jurists have always maintained the constitutionality of our tariff legislation, and there is not the slightest chance that the Supreme Court will ever pronounce a protective tariff unconstitutional.

The really cogent arguments of the advocates of a *tariff for revenue only* are those which aim to show that, on the one hand, the protectionist policy either fails to accomplish the end sought, or is of no assistance in accomplishing the desirable object which it contemplates; and that, on the other hand, it actually does work positive injury to national interests.

In the first place, (3) they claim that protection is *not necessary to the development of national feeling*. In proof of their claim, they point to the fact that the last half-century, which has witnessed an unprecedented spread of

international trade, has also witnessed a wonderful growth of national sentiment throughout the world.

The free-traders claim also (4) that protective tariffs are *not necessary to produce diversity of industry*, particularly in the case of a country like ours. It may be admitted that a purely agricultural nation is not likely to progress rapidly; but it is not easy to understand how a country so vast as ours, of so varied a climate, of boundless natural resources, can be anything but a country of diversified industry, if industry itself is left unhampered by burdensome restrictions and regulations.

The General Influence of Protective Tariffs. — The free-traders insist that (5) *when a new industry is started in any country as a result of a protective tariff, it is started by withdrawing or withholding the necessary capital and labor from some other industry which would naturally be more profitable, and that therefore every such new industry really means a decrease in the productiveness and wealth of the country.* By way of qualification, most free-traders admit that such new industries may attract to the country some foreign capital which would otherwise be invested elsewhere, and that if such "infant industries" rapidly reach a condition of self-supporting independence, the nation may be repaid for the expense incurred in hastening the establishment of such industries. But they justly protest against applying the name "infant industries" to businesses that have received tariff protection from the country for nearly a century. Indeed, (6) the fact that "infant industries" have thus prolonged the period of their infancy, and, in some cases, have clamored for protection even when they are or should be self-supporting, furnishes one of the strongest arguments against a policy of protec-

tion. If they do not become self-supporting, they continue to hold prices up beyond a reasonable point; if they do become able to withstand competition, but still have protection, they may by combining maintain a higher price than open competition would establish. The last few years have shown beyond question that protection favors monopoly by shutting off healthful international competition. It has usually been claimed by protectionists that the competition of home producers would suffice to keep prices down. Now, however, we are confronted by the obstinate fact that in the case of a number of protected industries, combination is taking the place of competition; and home producers compete at low prices in foreign markets, while charging their countrymen such higher prices as protection enables them to exact.

The general argument of the free-traders is that with nations as with individuals *each party to trade will regularly secure the greatest advantage if the trade is left unrestricted.* Protection, they urge, is *essentially injurious, in that it regularly diverts industry from channels by nature more productive to others by nature less productive.*

Does Protection protect Labor? — The free-traders maintain (7) that the argument of the protectionists that a protective policy benefits the laborer will not bear close analysis. For nearly two centuries before any protective tariff existed in what is now the United States, the high wages of American laborers had been repeatedly noted and explained. Land could be had for the asking, and laborers would not consent to work for hire unless they could receive a wage high enough to tempt them away from independent peasant proprietorship. The same condition has existed during the last century, and almost

down to the present day. The whole question of the connection between the tariff and wages involves a discussion of many complex economic problems. It must be sufficient here to suggest a single important consideration bearing upon this question. Labor competes, not with commodities, but with labor. The laborer himself wants commodities and the more of them he can secure for his labor the better. In other words, it is not high money wages alone but high wages in connection with low prices that indicates national welfare and prosperity. If, then, labor is to be protected, a tax should be put on the importation of labor rather than upon the product of labor. Otherwise, the laborer may find his wages lowered by the competition of a multitude of imported laborers, while he finds the cost of living unduly raised by the protection which has been granted to the domestic entrepreneur.

General Considerations. — Certain general considerations remain to be suggested. In the first place, the importance of this whole question has been much exaggerated. England prospers with free trade, the United States has prospered under protection. How far England's prosperity has been due to free trade, how far the prosperity of the United States has been in spite of protection, we cannot tell. The tariff system is one of real, but not of vital, importance. Moreover, the domestic trade of the United States is vastly greater and more important than her foreign trade. Indeed, the domestic trade of the Mississippi valley alone is far greater than our entire foreign commerce. Evidently, then, we can thrive as we have thriven, under protection, since by far the greater part of our trade is already free trade.

In the second place, statistics regarding national pros-

perity, as they are usually presented, throw little light upon the question one way or the other. The tariff policy of modern countries has undoubtedly been a minor factor in their industrial life. Inventions and discoveries, the spread of general and technical education, the hopeful ambition of all classes of our people, the growth of intelligence, have been chief among the forces that have made such astounding additions to the wealth of the world during the past century.

In the third place, the American tariff system, bad as it undoubtedly is in many respects, is a historical growth that has taken deep root. It conditions directly or indirectly a great part of our industrial life, and it cannot therefore be suddenly eradicated with impunity. Yet it is impossible to tolerate permanently a bad condition of things, and we are justified in demanding that there shall be progress in our tariff policy. Even selfish considerations are likely to lead to a demand for revision of our tariff schedules, now that other powerful nations are retaliating or threatening to retaliate for our unneighborly tariff treatment of them.

SUMMARY

1. International trade, in its elements a trade among individuals for money, is in effect trade among nations of goods for goods.
2. The balance of trade is the chief element in determining the rate of exchange.
3. International values are influenced by the fact that labor and capital do not flow from country to country so readily as from section to section of the same country.
4. General prices and the national money supply are regulated by trade conditions.
5. Regulation of international commerce has been common among all civilized nations.

6. Protection is defended as promoting nationalism, the diversification of industry and industrial independence, saving costs of transportation, keeping up the soil, and maintaining high wages.
7. It is attacked as being unnecessary to the development of industry, as opposed to "natural rights," and as being unconstitutional. It is further claimed that it regularly and naturally diverts labor and capital from employment that would be more productive by nature to industries in which the employment of labor and capital is naturally less productive.
8. Protection often fosters and protects monopolies.
9. Our tariff system, as a historical growth, must be modified conservatively and carefully.

QUESTIONS

1. What are the advantages of international trade?
2. How is the rate of exchange determined? What is the "specie point"?
3. What relation has international trade to the distribution of money among nations? To general prices in different countries?
4. What is protection? Discuss the arguments offered in its support. In opposition.
5. Why have American wages always been high? What bearing has this on the protectionist argument?
6. What objections are there to a sudden change in the tariff system? How many laborers are affected by our tariff system?

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Nearly all standard economic treatises on Economics arrive at a conclusion generally opposed to protectionism; but in England, on account of the efforts to draw parts of the empire more closely together by common interests, there has recently been a reaction against free trade which has strongly influenced a few English economists.

PART IV.—DISTRIBUTION

CHAPTER I

INTRODUCTORY

The Meaning of the Word “Distribution.”—Having studied under the head of consumption the human wants that lead to economic activity, and the satisfactions that result from consumption ; having studied in the second place the production of goods and services for the satisfaction of human wants ; and having in the third place studied the subject of transfers of goods and services, and especially of their exchange among producers or between producers and consumers, we come now to a study of the distribution of the income of society, especially among the factors that have united in its production. Under the heading Distribution we might, and to some slight extent shall, consider the division of the social income among individuals ; but this part of the entire subject of distribution is so vast and so complex that we cannot in such a book as this attempt a complete treatment of it.

There is one sense in which the word “distribution” is *not* used here. We shall not use the word in the sense of moving goods from the place where they are produced to the place where they are consumed. When we speak of railways or retail stores as “distributive agencies,” we are

using the word in a sense wholly different from that of the technical term which describes one of the four main divisions of economic analysis.

Before passing on to study the determination of the great shares of the annual product of industry, it will be well for us to pause for a moment to consider certain general ideas that underlie all the special topics which are to follow.

Social Wealth and Social Income.—*All the economic goods that society has for use at any time constitute the social wealth. The satisfactions that flow from the social wealth and services during any period of time constitute the social income for that period.* Social wealth is, therefore, a *fund or reservoir* from which issues one of the great *streams* of social income, the other proceeding from services. The body of social wealth in any two nations may be of the same volume, while the stream of social satisfactions may be of very different volume in the two cases; for the size of the social income depends not alone upon the size of the social wealth, but also upon the completeness with which that social wealth is utilized and upon the services rendered. Well-being, moreover, is increased by the satisfactions flowing from the use of free goods, and is not dependent merely on income.

Private Income.—The social income is of course shared among the members of society. *That part of the social income which the individual enjoys is his real private income. The money which an individual receives during any period of time constitutes his money or nominal income.* It is important to keep this distinction in mind, since equality of money incomes may coexist with great inequality of real incomes, and *vice versa*. Thus it is a commonplace

to-day that city laborers regularly receive higher money wages than the same classes of laborers in the country. But the differences in cost of living would go far to make the real incomes of the two classes equal. Again, a house occupied by its owner yields a real income to him, though this does not enter into his money income at all.

Private Property. — Private incomes depend upon the institution of private property. Every change in the laws of property is bound to change to some extent the production and exchange of goods, and hence the social income, but to a still greater extent and more immediately every such change reacts upon the distribution of the social income among those who share it. The importance of our property laws is therefore evident. These laws have sometimes been so fixed and unchanging that they have wrought injustice to great classes of people; e.g., the laws making human beings private property.

Primary and Secondary Processes of Distribution. — Under modern industrial conditions there are two regular ways in which individuals secure their share of the social income. In the first place, (1) there is a class of men who receive their incomes *directly from the use or sale of the product* which they make or the making of which they direct. Thus the independent farmer secures his income from the produce of his farm, either by consuming it directly or by exchanging all or part of it for money or other commodities. So, too, the professional man regularly receives his income directly from the sale of his services. The same is true of the independent entrepreneur. His net income is that part of the goods produced which remains after he has paid the necessary expenses of the business. *This process of distribution, by which the incomes are derived directly from the use or sale of the goods or services, is called primary distribution; the resulting incomes are called primary incomes.*

But the greater number of those who receive regular incomes in advanced industrial nations secure them in a different way. Hired laborers, capitalists who lend their capital to others, and landlords who rent their farms—all these classes get their incomes not directly from the consumption or sale of the product of industry, but (2) *through contractual relations with receivers of primary incomes*. This process is called *secondary distribution*, and the resulting incomes are *secondary incomes*.

A Third Process of Distribution.—Analysis of distribution might be carried still further to show the presence of a third, or (3) *tertiary*, form of distribution and incomes. Minors, who constitute about one-half the total population of every country, and whom the parents are legally bound to maintain, and the large classes of delinquent and defective persons in the community, receive their incomes not through the use or sale of goods or services produced by them, nor through contractual relations with receivers of primary incomes, but from those who do receive primary or secondary incomes. If it were not for this distribution,—often *caritative*, as it rests on love and benevolence,—the competitive system, which in the main dominates our industrial life, would be unendurable.

The Shares and Share Receivers.—As we have said, the distribution on which attention will be centred in the following pages is the distribution of the product of industry among the great factors that have united to create it. The factors considered in the study of production were land, labor, and capital; and in that order we shall consider the distribution of the product among them. The shares of these three factors are known as *rent*, *wages*, and *interest*. But the entrepreneur—he who secures and directs the organization of the factors—is also an important share receiver in modern industry, and hence we shall study the principles governing his share of the product,

called *profits*. Some writers, in view of the great part played in all production by the State, treat separately the share received by the State. All that for our purposes needs to be said regarding the State's share in the product of industry will be presented in the final chapters of the book, under the head of Public Finance.

Relation of Individuals to the Four Shares. — And now just a word as to the relation which share distribution bears to distribution among individuals. Individuals regularly receive their incomes by virtue of their proprietary relation to one or more of the factors of production. Thus, when we are discussing the share of the annual produce that goes to land, we are at the same time explaining the principles which determine the size of the rent income of the farmer himself. Similarly, an inquiry into the shares received by capital, labor, and entrepreneurship brings us more or less closely to the question of the income of the individual capitalist, laborer, or entrepreneur. But it is the share of the factor as a factor that we shall study primarily, noting only incidentally the results of the distribution upon the income of individuals. The importance of this distinction appears when we reflect that a justification of the share of industry that goes to land or capital is not a justification of the landlord's or the capitalist's income, unless the possession of the land or capital is also justified.

SUMMARY

1. Distribution is that part of economics which deals with the division of the social income among individuals and classes, and among the different factors of production.
2. Our modern system of distribution depends directly upon our institution of private property. It is therefore along the lines

of changes in private property that improvement of distribution is, in part, likely to come.

3. Primary incomes are derived directly from the product; secondary incomes are the result of contract relations with those who control the product; tertiary incomes are incomes derived from receivers of primary and secondary incomes.
4. Private income is the individual's share of the social income. Real income consists of commodities and services which the individual has for his consumption. Money income is the money received by an individual during any period of time.

QUESTIONS

1. What is distribution? What problems does it seek to solve?
2. What is the relation of private property to distribution? How is this illustrated in the case of land? In the case of capital?
3. If a physician's practice is worth \$10,000 a year, what is his money income? Mention some of the things that probably go to make up his real income.
4. What other persons are likely to enjoy a part of this income? What sort of an income is that which falls to his children? Is the physician's income primary or secondary? Mention different classes of incomes that you are familiar with, and show whether they are primary, secondary, or tertiary.
5. What is the primary process of distribution? The secondary? The tertiary? Mention examples of the last. What is private income? How does it differ from social income?

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CHAPTER II

RENT

As in the study of the factors of production we first discussed the factor land, so here in our study of the distribution of the social income among the factors that contribute to its production, we may logically begin with a discussion of the return to the first factor.

Meaning of the Term. — As used by economists, the word "rent" means that which is paid for the use of land or other natural agents. The popular meaning of the word "rent" is less exact. In everyday life we hear people use the word to describe that which is paid for the use of a house or other building. But such so-called rent contains two elements, one of which is not economic rent at all. The amount paid for the use of a house includes the amount paid for the use of the land upon which the house stands, which is economic rent ; but it also includes payment for the investment of capital in the form of a building, and this latter return is therefore not rent, but interest. The reason for the popular confusion lies in the fact that both are usually paid to the same person. In some cities, however, separate ownership of lot and building is not uncommon. One man may own the building site and lease it for a long term of years to another man who erects a building upon it. In such a case the building becomes the property of the landowner at the expiration of the lease, unless the lease is renewed. In

other cases the separation in ownership is permanent, the houseowner paying an annual sum to the landowner for the use of the ground. This is the case, for example, in Baltimore, where ground rents are an important feature in the economic life of the city. Let us remember, then, that in economic discussions, the word "*rent*" means only *that which is paid for the use of land or other natural agents*. Inasmuch as land is the chief natural agent appropriated by man to his uses, it is usual to speak of land as if it were the only natural agent for which rent is paid. It is therefore necessary to caution the student at this point that when the word "land" is used in the following pages, it will almost always be possible to substitute for it the more general term. In other words, the same forces which determine the rent of land determine in the main the rent of other natural agents.

1. *The Quality of the Land.* — The first thing to be noted about land is its *quality*. Differences of fertility of agricultural land are familiar to every one. They depend upon what one of the early economists described as the "natural and indestructible properties of the soil." In recent years many writers have objected to this statement. It has been said by way of denial that soil is not "indestructible"; that it may be and often is exhausted; that it may be removed from the land altogether, and that on the other hand it may be created by fertilization, etc. The disagreement which these writers express is due in large part to their use of the word "soil" in its narrow sense. If we use the word "soil" only to distinguish the thin top layer of the land that contains certain chemical elements necessary to plant life, then some of the objections just stated are valid ones. Such "soil," as distinguished

from subsoil and the ground lying underneath, may indeed be carted on or off the land at pleasure and may be wasted or replenished. But even granting this, there still remain certain qualities of the land that are practically or entirely indestructible and unproducible, and which affect the productiveness of the land so directly that we may without impropriety speak of them as "properties of the soil." Such a property is the conformation of the land. A steep gravelly hillside does not equal a plain in fertility, nor is the north side of a mountain as productive as the south side, other things being equal. Again, climate, although strictly speaking not a "property of the soil," is an inseparable condition of the land, upon which to a very great degree the productiveness of the land depends. It would be better to speak of these forces governing the quality of the land as *the inseparable conditions affecting its productiveness*. Of these, extent (standing room), conformation, and climate are essentially natural and indestructible.

As we have just seen, under the "original and indestructible qualities of the soil," or, to use the phrase suggested, the inseparable conditions affecting production, we must include the general physical environment, and this means much more than many modern critics have recognized. Concrete instances will aid us in appreciating the significance of this environment. In the western part of New York State, along the shores of Lake Erie, we find a region which is admirably adapted to the production of table grapes. This is due in part to the properties of the soil itself, but more particularly is it due to the presence of Lake Erie, which, by absorbing the heat in the springtime, delays the appearance of vegetation, and by giving off heat in the fall retards the action of the frost, thus giving the grapes time to ripen. If we go to

Palisade in the western part of Colorado, we find a region so admirably adapted to the production of peaches that some of the land is valued at \$1000 per acre. This is due, not merely to the properties of the soil, but also to the peculiar location of the region, which is of such a character that the breezes keep off the frost. Land thirty miles to the west, which is apparently similar in quality, will not produce peaches and is far less valuable. Careful consideration of actual agricultural conditions leads to the conclusion that, while man can do much to create fertility, it is a serious error not to attach great significance to the inseparable conditions affecting the productivity of the soil.

While it is true that the soil can be removed and that fertility can be increased or decreased, and consequently is not indestructible in a physical sense, we may speak even of fertility as economically perpetual, just as one modern economist has called "capital value" perpetual. While the land yields an annual return, its fertility may be maintained and even increased by wise husbandry. It is only, then, by a wasteful and prodigal agriculture that the original gifts of nature in the fertility of the soil are exhausted. Similarly the value of the capital invested in a manufacturing plant is maintained under wise management, though the concrete capital forms are undergoing constant destruction. But, as it is easier to retain the fertility of the soil in perpetuity and to increase it than it is to maintain and increase the value of capital, land has in this particular a superiority.

Fertility, even when artificial, becomes essentially a part of the land. The farmer, when he invests his capital in fertilizers, makes a contribution which becomes indistinguishable from the soil itself. From such a case, when capital is embodied in the land and assimilated to it, we pass by insensible gradations to fences, barns, houses, etc., which more and more retain their distinct character as removable and reproducible capital. Where, then, is the

line between land and capital to be drawn? We might, to be sure, restrict the term "land" to strictly natural land, and apply the term "capital" to all *products*, including even the soils of old lands which have been kept productive by fertilization. But this distinction, while perhaps logical, would for practical purposes be confusing. On the other hand, if we include under land all capital that has been insensibly incorporated in it, we must acknowledge that there is no hard and fast line of division between land and capital. Here again we are reminded that in economics, as in everyday life, distinctions are governed by convenience, and are good or bad according as they are more or less useful.

The distinctions between land and capital are now undergoing discussion and may be regarded as debatable ground in economics. We cannot enter into the controversy in this place or give all the reasons why it seems to us that the differences between land and capital are fundamental in their theoretical and practical significance.

2. *The Situation of the Land.* — The second great fact to be noted about land is its *situation*. On one side this is closely connected with climate. Thus, the significance of situation near a large body of water or near a mountain range has already been pointed out. But the situation of land with regard to the consumers of products is of even greater significance. Other things equal, land a hundred miles from market is more valuable than land a thousand miles from market. This difference is really one of communication and transportation, and therefore, of accessibility, which depends mainly upon distance. But land may be far away, yet easy to reach, or near, yet difficult of

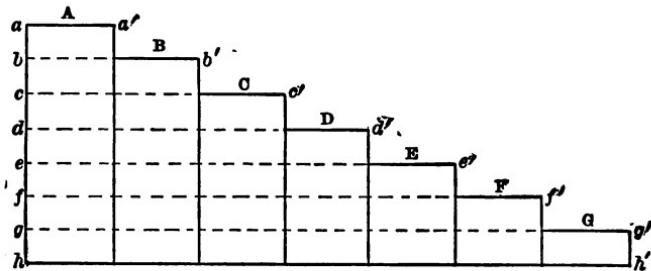
access. Changes in the cost of transportation therefore affect rents profoundly. Thus, the agricultural rents of England have been revolutionized during the last century by cheap ocean transportation, which has practically brought distant lands very near to her shores.

To this fact of situation we must ascribe almost wholly the enormous rents paid for city lots, as contrasted with the rents paid for lots in suburban places or in small towns. Here, too, rapid and easy transport powerfully affects rents. Good means of rapid transit increase the value of suburban lots and check the rise of rents for residence sites in the cities themselves.

And now, having noticed that all the minor economic differences in land resolve themselves into differences of *quality* or of *situation*, we may go one step farther and reduce these two differences, for the purpose of convenience, to one, viz., *desirability*. Suppose, for instance, that a man in New York City owns two farms, one in the state of Dakota, the other in his own state. If the Dakota farm produces thirty bushels of wheat to the acre, and it costs the price of ten bushels per acre to get the crop to market, while the New York farm raises twenty-two bushels per acre and it costs two bushels per acre to get the crop to market, the farms are equally productive as far as the owner is concerned. Other conditions being the same, the two pieces of land are equally desirable. In short, we may say that they are equally *good* land. Whenever we speak of good land therefore in connection with the subject of rent, we mean land which for all reasons taken together is desirable. It will be absolutely necessary to keep this in mind in studying the following pages.

RENT OF AGRICULTURAL LAND

To-day there exist large areas of land which may be had for nothing. Of this land some is cultivated which pays no rent; some is not cultivated at all. Why, then, is it that some land will bear rent under such circumstances? Obviously, because that land is more desirable than the land which may be had for nothing. And how much rent will it bear? It is equally obvious that assuming the cultivators to be of equal degrees of efficiency, the rent will be measured by the difference in desirability. Let us illustrate this by a diagram.



Suppose the above to represent all land, arranged in seven groups according to desirability, each small parallelogram representing four bushels of product per acre in excess of the amount of the product necessary to pay for marketing the crop. Then the first group, deducting enough of the product to pay for transportation, will put in the market 28 bushels of wheat per acre; the second, 24; the others, 20, 16, 12, 8, and 4, respectively. Now if the people are few and need a small part of the land, they may cultivate only *A*, or the most desirable land. As long as there is enough of

this land, if it is of equal desirability, there will be no rent, for no man will pay rent for what he can get for nothing. But the time may come, with increasing population, when more land is needed, and cultivation is driven to *B*. Land is still free there, but all of group *A* has now been appropriated. If, then, any man insists upon cultivating land which belongs to an owner in group *A*, he must pay for the privilege. How much must he pay? Evidently it is 4 bushels per acre, since in group *A* he can produce 28 bushels per acre, while in group *B* he can produce only 24 bushels. The land in *B*, which is free land, is now the *extensive margin of cultivation*; that is, the grade of land which will just pay for cultivation and no more. The normal reward to labor in agriculture is the total return to cultivation on this margin of cultivation, after deducting a return for the capital invested in the work. The surplus product from the superior land—in other words, the advantage which owners of land in *A* have over the tillers of the free land—is rent. And it is rent whether the owners of the land in *A* work the land themselves or lease it to others. The money expression of the rent in this case is the market price of the 4 bushels of wheat that represent the differential advantage in production possessed by workers on the more desirable land.

If population increases still further, without any improvement in the arts of production or of consumption, the margin of cultivation will in time descend to land in group *C*, where the number of bushels produced by a given amount of labor and capital is less than before. Land in *B* will now return a rent of 4 bushels per acre, while land in group *A* will return a rent of 8 bushels per acre. If the margin of cultivation is later forced down to *E*, then

rents on land in *B* will equal one-half, and on land in *A* will equal four-sevenths, of the entire product of such land.

Intensive Cultivation. — With the figure in mind, let us place ourselves again at the point where all the *A* land is taken and men are beginning to seek new means of production. We have assumed that they will take up new land in group *B*. This is not the only possibility, however. It is probable that land in *A* may be made to produce more than it has, if the amount of labor and capital expended upon it is increased. In other words, it will be possible to cultivate the old land more *intensively* at a profit. Suppose that ten men formerly cultivated 100 acres of *A* land, raising 2800 bushels of wheat, and that now eleven men put their labor upon the 100 acres. It may be that the 100 acres will now produce 3060 bushels, in which case it is evident that the labor of the eleventh man has made a difference of 260 bushels. The 2800 bushels raised by the ten men meant 280 bushels of crop per man. In accordance with the *law of diminishing returns*, the eleventh man does not increase the output proportionately, but he is still producing two bushels more than he would if he were to work on the *B* land, where by our assumption ten men could produce only 2400 bushels on each 100 acres. The owner will give such a laborer only what he could get elsewhere, on the *B* land, which would be 240. The difference between the 240 bushels and the 260 bushels, the owner of the superior land takes for himself. Encouraged by this, the owner thinks of hiring a twelfth man, but concludes that he would thus secure a crop of only 3280 bushels. Hence the twelfth man would increase the output by only 220 bushels, while he would have to be paid 240 bushels, the amount that he

could earn by working free land in group *B*. All new laborers, therefore, in excess of one for every ten of the earlier laborers, would find it more profitable to put their labor upon the free land. Hence, as the demand for agricultural produce increases relatively to the supply, new labor and capital are expended upon land already under cultivation as well as upon land not before used. The rent of such land is increased by the surplus yielded by every addition of labor and capital. In other words, there is a change in both the *intensive* and *extensive* margins of cultivation. With every increase in the price of produce, and with every fall in the extensive margin of cultivation, more labor may be employed profitably on land already cultivated. Thus the landowner, who in the case last supposed could not afford to employ a twelfth laborer, may be able to employ thirteen or even more when the extensive margin of cultivation has fallen to group *C* or *D*.

From the foregoing it is clear that the theory of rent is based upon the law of diminishing returns, which has already been explained in a previous chapter. It is evident that, *barring improvements in the arts of production or consumption*, each addition to the number of mouths which must be filled, at least beyond a limited number, makes harder the task of drawing sustenance from the earth. But we know that improvements have hitherto more than kept pace with increasing population.

RENT OF URBAN LAND

The fact that situation is the factor of special importance in determining the desirability of urban land leads

to certain peculiar results that call for separate discussion. We may consider first of all land used for residential purposes. Cities have sections which natural beauty, healthfulness, convenience, and especially fashion have rendered especially desirable. In proportion to demand the supply is sharply limited, and this brings about a keen competition. The height to which this competition will carry rents will depend upon the number having large wealth, and their readiness to spend money for what they regard as desirable sites for homes, fashion in our cities having perhaps more to do with intensity of desire than anything else. Similar considerations will affect the height to which rent for business sites will rise. The higher the average of well-being and the more ready people are to spend money, the higher will such rents go. Fashion enters here, too, particularly in the retail trade. If people spend money readily, they will pay appreciably more for an article in a convenient locality than for the same article in a slightly less convenient situation. This will frequently enable those doing business in desirable locations to secure higher prices with a larger number of sales, or to increase still further the number of sales by keeping the same price which competitors less desirably situated ask. *Intensity of traffic* is an important consideration in determining the rent, and consequently the value, of retail business property. We must also take into account the quality of the people who make up this traffic, the rent depending upon both numbers and quality. In some cases a high degree of intensity may counterbalance a lack of fashion, or even more than counterbalance it, so that retail business property in a neighborhood which is not fashionable may, on account of the intensity of traffic,

have a higher rent than retail business property in a fashionable locality with comparatively little traffic. The influence of fashion, however, can be seen in a very marked manner in a city like New York, where large numbers of rich people would on no account make purchases on an "unfashionable" street. The result is a large surplus gain secured by business sites favorably located. Competition transfers to the landowners this surplus due to location. This explains what has puzzled so many, namely, the high rents in American cities as contrasted with European cities. Our cities are spacious, but other considerations than space govern rents.

Reflection will show that where the two elements of a high degree of scarcity and desirability enter into the location of land on the seashore or in summer resorts on the mountains, similar causes will give high rent. On the other hand, it is commonly a matter of unconcern where the potatoes and beef we eat are produced, and the result is that agricultural rents are less governed by situation, transportation being the chief consideration in this particular.

The Relation of Rent to Value of Product.—It is often said that rent has no influence on the value of the product, rent differing herein from wages and interest, which are said to determine price. This at first sight seems paradoxical, inasmuch as the tenant must pay rent to the landowner as well as interest to the capitalist and wages to his laborers. The paradox is explained by saying that prices are fixed by the expenses of production on the poorest land, where wages and interest are paid, but no rent. Hence the rent that is paid for the better land is the result of the price fixed in this way and not a cause of it.

This doctrine is true in the main, but requires limitations.

To the extent that land is indestructible and does not require any payment to keep its services in production, it is correct to say that rent does not enter into price. On the other hand, to the extent that labor and capital require a remuneration to keep them from perishing, wages and interest clearly do enter into price. But so far as regards the payments which are necessary to keep up the fertility of the land, and so far as regards the surplus above maintenance which labor and capital receive, the statement is not true.

The Relation of Rent to the Value of Land. — The value of land, however, is determined by its rent. *The value of the product determines rent, and rent in turn determines the value of the natural agent.* If any piece of land is so much more desirable than the poorest piece of land in cultivation that it will return a rent of \$5 per acre, and if at the same time and place capital regularly commands 5 per cent interest, then the owners of the land and others will regard each acre of this land as equal in value to an amount of capital that returns \$5 per year, or \$100. Hence we may say that *the value of land is its rent capitalized at the current rate of interest.*

Definitions of Rent. — We are now prepared to define rent more accurately and completely than was possible before, and to see that different definitions which may be given really describe the thing from different points of view. Thus the definition "rent is that which is paid for the use of land or other natural agents," conveys no idea of the power by which it is secured nor of the way in which its amount is determined. Hence, we may add the following definition: *Rent is the amount produced by land or other natural agents in excess of a normal return to the labor and capital devoted to its cultivation.* In this defini-

tion, however, there is no direct indication of those differences in desirability from which rent arises. We may, therefore, give as our final definition, the following: *Rent is a differential return received by the owners of superior natural agents, the amount being determined by the extent to which the given natural agent or the given use of the agent surpasses in productiveness the poorest natural agent of the same sort or the least profitable use of such a natural agent that society requires to satisfy its need for the product.* In all this, we have assumed that cultivators are of equal efficiency. Differences of product due, not to differences in the natural agent, but to differences in the ability of those who use the natural agent, do not require explanation at this point.

SUMMARY

1. Rent is the return paid for the use of a natural agent, and is equal to that part of the product of the natural agent which is in excess of the product of the poorest agent of the same sort that is cultivated.
2. So long as land exists in excess of all demand, rent is determined by the excess of product over that of the poorest free land.
3. When land is all taken, and all is cultivated that will repay cost, rent is determined by the excess of product over the necessities of laborers,—as determined by the law of wages,—and the necessary reward to the capital invested in cultivation.
4. Increased demand for the products of the soil regularly results in the cultivation of more land (extensive cultivation) and in the application of more labor and capital to that already in cultivation (intensive cultivation).
5. In a given stage of the arts of production a point is reached in the application of economic energy to any natural agent, beyond which the return to further applications of energy is proportionately less. (The Law of Diminishing Returns.)

6. Special importance attaches to situation in the determination of urban rents.
7. The value of any natural agent is determined by its rent capitalized at the current rate of interest on free capital.

QUESTIONS

1. On what is rent based? Why would rent disappear if land were unlimited in amount and all of equal quality?
2. Discuss the differences in desirability of land.
3. How is the amount of rent determined when free land exists?
4. What is the extensive margin of cultivation? The intensive? What is intensive cultivation? What determines how far intensive cultivation may profitably be carried? State the law of diminishing returns. Show how it applies to land used for manufacturing. For commercial buildings. For city residences.
5. What effect does a lowering of the margin of cultivation have upon rent? Why?
6. What is the effect of improvements in the arts of production? Of consumption? Of transportation? What are the forces in society that tend to raise agricultural rents? Urban rents?
7. Why does not rent determine price?
8. How is the value of any natural agent measured?

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CHAPTER III

WAGES AND THE LABOR PROBLEM

I. HOW WAGES ARE DETERMINED

WE have pointed out that of the factors of production, land and labor are the primary and original ones. Having discussed rent, or the portion of the product allotted to the owners of land, we may next properly consider wages, the portion allotted to labor. First of all, it is to be noted that in the study of wages there are really two distinct problems to be investigated. What share of the total produce of industry goes to labor? This is the problem of *general wages*. But having answered this question, we shall still have to ask ourselves why some classes of laborers receive greater incomes than others; why glass-blowing, for instance, is paid for by a higher rate of wages than is ditch-digging, and so on? This second problem is called the problem of *relative wages*. We shall discuss the two problems separately as we have here stated them.

1. *General Wages*. — It follows from our discussion of the determination of value that if wage-earners were in excess of all demand for their labor, such labor would have no value; wages would be nothing. On the other hand, if laborers were few and in great demand, only the more intense wants for labor could be satisfied, and wages, or the value of labor, would be very high. It is evident,

then, that wages, the value of labor, depend primarily upon two things: the number of wage-earners, and the demand for their labor. In other words, wages depend upon the relation between the supply of labor and the demand for it. But this statement is too general to be of great use. We must therefore consider further the forces that determine the supply and the demand.

The Number of Wage-earners.—We have already discussed the tendency of the human race to multiply. Beyond all doubt the desire for marriage and family is one of the strongest and most universal of human desires. But over against this desire stand many others—desires for food, clothing, and a multitude of other things which are of course arranged and satisfied in the order of their economic importance. No man intentionally satisfies weaker desires at the expense of stronger ones. In the whole list of desires, that for marriage must take its place according to its importance. The rank of this desire varies with individuals and classes. Some regard education, books, art, or even a substantial bank account as more important than marriage in their scale of desires. *The amount of necessaries, comforts, and luxuries which any person or class is accustomed to enjoy and to insist upon having, is the "standard of life," or the "standard of comfort," of that person or class.* This standard of life, though incapable of precise definition, is a very real and powerful force in the determination of wages. Whenever wages tend to fall below the point at which the workman can maintain his standard of life for a family, many workmen will do without the family, and will attempt to maintain the standard of life for themselves alone. This force operates upon both men and women

to prevent or postpone marriage, and to diminish the number of children born. *The higher is the standard of life, the greater is the persistence shown in maintaining it.* Those whose standard is very low are often heedless or hopeless when that standard is threatened; while those who have attained a high standard display marked caution in delaying marriage until their income will justify such a course. It is plain, then, that the standard of life constantly limits the number of wage-earners, and hence tends to maintain or even to increase the value of labor.

The Economy of High Wages.—In what has just been said we have simply noted the influence of the standard of life upon the number of laborers in the labor market. But the result is equally striking when we come to consider the influence of the standard upon the efficiency of labor. Even from the standpoint of employers as a class, the policy of depressing the laborer's standard of life stands condemned. Labor, to attain its highest efficiency, must have character and intelligence as well as mere brawn. More and more, business men are coming to learn the "economy of high wages," and that "cheap labor is dear labor." Especially is this true at the present time when industry is becoming more and more divided into the two classes of machine industry and hand industry. American labor is in many industries the cheapest labor in the world because it is the best paid. High wages make possible a high standard of life. The high standard of life makes the labor intelligent, hopeful, and full of character, as well as more efficient physically. And the increased efficiency makes possible the higher wages. Thus by action and reaction the standard of life is both a cause and a result of the wages received.

The Demand for Labor. — In what has gone before, we have considered especially some of the forces that operate to control the *supply* of labor in the labor market. In other words, we have been considering the problem of wages chiefly from the standpoint of supply of labor. It remains for us to see how far we can explain wages from the standpoint of demand. Manifestly, under our present industrial system, capital will not be saved nor businesses conducted unless those who save the capital and those who conduct the businesses receive a reward for their contribution to production. If the laborers in seeking higher wages enforce demands that would rob the capitalist of the interest that is his due, or the entrepreneur of the profits that secure his services, then shortly the capital will cease to be saved and the unprofitable businesses will be discontinued. It is evident, therefore, that the demand for labor has an upper limit in the value to society of the product of the labor. By unjust laws, by inequitable conditions, the employers may be able to secure labor for less than the laborer contributes to the value of the product, but it is not easily conceivable that under present conditions of industry the labor can for long get more than it actually produces.

Summary of Theory of General Wages. — Summing up now what has been explained at length, we may say that *wages depend upon the relation between the supply of labor and the demand for it.* *The supply of labor*, and hence the lower limit of wages, *is fixed* with some sharpness *by the standard of life* of the laborers. *But as this force operates slowly, it may in extreme cases happen that the only lower limit to wages is the amount which will enable the laborers to live.* In earlier days some of the economists seemed to

think that wages would normally and in the long run rest at this point of bare subsistence, and the law of wages which they formulated was therefore called, from its rigidity and its harshness, the "iron law of wages." *On the side of demand, we can only say that there is an upper limit, fixed by the value of the laborer's contribution to the product, beyond which wages cannot normally go, since the demand for labor cannot be measured at a higher price than the price of what it produces. Consequently the demand for labor may result in giving to the laborer in wages the whole of the product of industry after deducting rent and such minimum interest and profits as are fixed by laws to be explained later. Between the lower limit, set by the standard of subsistence or by the standard of life, and the upper limit, set by the value of the laborer's contribution to product, wages will fluctuate according to the relative bargaining strength of the two parties to the wage contract.*

2. *Relative Wages.* — Coming now to the problem of relative wages, to the question why some classes of work are paid for at a higher rate than others, it is evident first of all that the pay of laborers in any class of employment depends upon the relation between the demand for such laborers and the supply of such labor, and upon the relative bargaining strength of those in each group. Thus far the considerations already discussed bear upon relative wages as upon general wages. But in the discussion of relative wages, there are certain special considerations to be borne in mind. Differences in relative wages are settled in the great majority of cases by past conditions. To understand them we must go back to a man's father or grandfather. Occupations where remuneration is high

are usually so difficult to enter that few are able to surmount the difficulties. Thus peculiar and rare qualities may be required, or an expensive training which few parents are at once able and willing to give.

While the various sorts of labor are almost infinite in number, they are nevertheless susceptible of a fairly distinct classification. These classes have commonly been called "non-competing groups." Perhaps the best naming of these is that made by Professor Giddings as follows: *automatic manual, responsible manual, automatic mental, responsible mental*. The words should explain sufficiently the different groups represented by them. Between any two groups very little competition is at any given time possible. What competition there is, is a matter of years, resulting, as it must, from the action of parents in preparing their children for entering one or the other of the groups.

The Influence of Public Schools.—A good system of public education continually increases the amount of freedom in the choice of occupations. Education gives greater knowledge regarding the advantages and requirements of different occupations at the same time that it puts its possessor in a position where he can more readily realize the one and meet the other. It therefore tends to lessen the competition for the lowest grades of employment, thus raising the wages there; while it tends to lower the wages in the higher grades by making the competition for such employment more keen.

Adam Smith enumerated the following five causes for differences of wages in different employments: first, their *agreeableness* or *disagreeableness*; second, the *ease* or *difficulty of learning them*; third, the *regularity of employment*;

fourth, the *need of trustworthiness* in the workman; fifth, the *probability of success*. Although this summary of determining conditions assumes an unreal freedom of competition among workmen to secure the greatest net advantage from their employment, it nevertheless is suggestive and helpful in explaining actual differences in relative wages. It will be a good exercise for the student to apply to existing occupations Adam Smith's statement of the causes of differences in wages.

II. LABOR ORGANIZATIONS

Wages have been shown to be largely dependent upon the relative bargaining strength of the laborers as compared with that of entrepreneurs and others who contribute to the work of production. The same thing could be shown to be true also of the other conditions of employment which enter into the wage contract. Such being the case, it is natural that under our modern wage-system laborers have sought to increase their bargaining strength by every means in their power. One of the most evident means is that of uniting their strength in labor organizations. By such organization labor is enabled to substitute "collective bargaining" for the individual bargaining under which the workman is at a manifest and great disadvantage. *Labor organizations, then, are more or less permanent combinations of laborers formed to increase their power of determining the conditions of employment.*

Origin. — The old mediæval gilds were organizations that controlled all the factors of production. Employers and employed united in a single body to regulate production, but the control rested chiefly with the masters.

Modern labor organizations, on the other hand, are the result of our capitalistic system of production, and date only from the eighteenth century. They embrace, as a rule, only employees, and the purpose is to promote the interests of the laboring class whenever those interests clash with those of the employers. It is the sharp separation of classes characteristic of modern industry that has made labor organization natural and necessary.

Two Forms of Organization. — Labor organizations may be divided into two classes, and as a matter of fact are so divided to-day in the United States and England. The trade-unions in the United States now allied in the American Federation of Labor and the "old" trade-unions of England are primarily unions of skilled artisans of distinct crafts. According to the old trade-union idea, each craft should be organized by itself. The Knights of Labor in the United States, on the other hand, and in England the "new" trades-unions are organizations of the laborers in general, skilled and unskilled. They aim to break down the barriers to common action found in differences of occupation.

Both in England and in the United States the two forms of unionism have in later times shown a tendency to drop the differences that have marked them. Thus the trade-unions in the United States have of late years united in larger federated organizations; first, in the central labor unions of our cities, and more recently in the national body known as the American Federation of Labor. This national body has even made provision for organizations of unskilled workmen and for local unions of men of different trades where those in any single trade are too few for successful organization. The Knights of

Labor, on the other hand, have borrowed a leaf from their rivals by organizing separately a considerable number of trades into what they call "district assemblies."

Growth of Labor Organizations. — Estimates as to the numerical strength of labor organizations in the United States vary considerably. Few of them, however, place the total number below a million, and the most recent government estimate, that for July 1, 1901, was 1,400,000. The number, of course, varies from time to time. A period of prosperity for the organizations is generally followed by one of reaction. The present seems to be a period of maximum prosperity following the period of depression lasting for several years after about 1893. Reaction has always ended in a new advance, and thus far in the United States each new advance has carried the labor organizations farther forward than ever before. The Labor Department of the English government in 1899 estimated the membership of British trade-unions at 1,802,518.

Strikes. — We cannot in this book discuss all the policies of labor organizations or all their methods of achieving their objects. One of these methods, however, calls for special comment. The *strike* constitutes one of the chief weapons of labor, organized or unorganized, just as the *lockout* is one of the chief weapons in the hands of the employers. Strikes produce harm, and therefore every effort should be made to avoid them, if the result can be secured by other means. It is only as a last resort that they can be justified, or are justified by the unions themselves. Yet the power of the strike as a lever of advantage is not to be despised. Observation based on recent American experience goes to show that more than one-

half of all strikes are successful in enforcing the demands of the unions. During the twenty years ending December 31, 1900, 50.77 per cent of the 22,793 strikes were successful, while 13.04 per cent of the whole number were partly successful. Even where strikes are apparently failures, they may accomplish much for the employees by inspiring sufficient fear of recurrence to bring about fairer treatment from unwilling and unjust employers.

Strikes are most likely to be successful when they are declared during a period of improving business ; and hence strikes for higher wages are more often successful than those aimed to prevent a reduction. Indeed, it has been claimed that employers have in some cases secretly encouraged a strike when they have desired to close their works during a period of slack business, in order to drive a better bargain with the men when the strike should have proved unsuccessful.

The Influence of the Public. — A powerful influence against violence and needless strikes is the recent great growth in public knowledge and public interest in matters that concern labor. Public support of their cause is now an object of frequent appeal by labor organizations. The use of "Union Labels," placed upon goods made by union labor under conditions satisfactory to the organizations, is becoming increasingly frequent and effective.

The National Consumers' League represents a movement of the same sort from without the ranks of labor. This league, organized only a few years ago, is rapidly extending its influence by granting the use of its "Consumers' League Label" to all manufacturers of certain classes of goods who satisfy the league that they are fulfilling prescribed conditions in the employment and treat-

ment of labor. As yet the label is used only on a few classes of women's and children's clothing, but it is the intention of the league to carry its work much farther.

Incidental Benefits of Labor Organizations. — 1. *Promotion of Temperance.* — Nearly all labor organizations are practically temperance societies, and many of their officers are total abstainers from alcoholic drink. On the whole, it may be confidently asserted that labor organizations have greatly lessened intemperance among workmen.

2. *Educational Influence.* — It would be hard to overestimate the importance of the educational feature of labor organizations. The debates and discussions which the unions foster stimulate the intellect and do much to counteract the deadening effect of a widely extended division of labor. Moreover, they furnish opportunities for social culture to women as well as to men, and thus lessen the temptation to coarse indulgence and develop the finer side of their nature.

3. *Elevation of the Standard of Life.* — It is often objected against organized laborers that they exclude worthy men from opportunities for employment, and seek by distressing part of their number to raise the wages of the rest. What they are really trying to do is to raise the workman's standard of life, in order that progress may mean for them not merely an increase in the number of men employed, but rather a betterment of the quality of human life concerned in the occupation. It is objected again that the limitation of numbers in one trade can only result in overcrowding others, and that therefore, if all trades were successfully organized, the results in one part of the labor field would neutralize the results elsewhere, and nothing would be gained. But such an objection

overlooks the essential fact that the union tends to check the imprudence that leads to over-population, and hence to maintain a just balance between the need of society for the labor and the need of the laborer for a complete human life.

Weaknesses of Labor Organizations. — Some of the weaknesses of labor organizations have already been touched upon. These and other weaknesses, some inherent in the nature of the unions and some accidental, may be briefly summarized as follows : —

1. *Based on Strife.* — It too often happens that labor organizations are based on strife. They aim to prepare their members for industrial war ; but we must hope for peace in industrial society, and any organization that does not look beyond contention to a cessation of strife has inherent in it a certain weakness.

2. *Limitation of their Benefits.* — They have often, particularly in their early history, sought to gain benefits by a selfish and exclusive policy toward other laborers. In some cases, they have been able to build up an evil labor monopoly. It must be admitted, on the other hand, that there is sometimes, even in these days, valid excuse for limiting numbers. Unscrupulous employers have at times sought to increase unduly the number in a single occupation in order to have a reserve force of unemployed from which to draw in case of need and thus to keep down wages.

3. *Production not directly Increased.* — Even when labor-unions do not actually try to limit production by restricting individual output, they usually make no effort to increase production or to diminish the wastes of competition. This is narrow, short-sighted action. What is to

be desired is not merely that a greater proportion of produced wealth should fall to the wage-earners, but that the total national dividend to be distributed among all classes should be increased; in other words, that *the laborer should receive an increasing share of an increasing product.*

4. *Ultra-conservatism.* — While radical in many ways, labor-unions have been too conservative in clinging to old methods and opposing progressive policies that will not benefit them immediately as labor organizations.

5. *Narrow and Short-sighted Views.* — It has been one of the weaknesses of labor organizations in general that they have not been sufficiently interested in public measures and reforms designed to benefit society. For example, they have given too little attention to sanitary matters and too little support to public health authorities in efforts to benefit the poorer classes. They have underestimated the importance of purity in politics and a highly trained civil service. At times they have favored measures which were bound to be ultimately injurious to them, simply because such measures would increase temporarily the supply of work. Opposition to labor-saving machinery and processes is of the same character.

6. *Lack of Flexibility.* — Labor organizations show another inherent weakness which is common to all great political and social organizations. Here red tape is necessary. General rules must for the most part govern, and individual interests must often be sacrificed or injured in seeking the welfare of the whole. One who examines into the nature of labor organizations will be able to find many good reasons why union men should object to working with non-union men. (a) The union entails certain expenses, and union men object to having non-union men reap the

benefits secured to labor by the organization without sharing in the burden of support. (b) An even more serious argument lies in the danger that employers will gradually substitute non-union men for union men who are strong in their organization, and thus break down the union before the workmen perceive the drift of things. Pretext can usually be found for discharging a workman, obnoxious as a labor-leader, however faithful and efficient he may be in his work.

7. "*Itching*" for *Political Power*.—Labor organizations too often have acted on the assumption that their members are fitted for political administration. Whatever the cause may be, however much the fact may be regretted, whatever the hope that the future holds out to them, labor organizations should frankly recognize that they have not the trained intelligence or the trained moral character needed for governing our country. Whatever benefits the wage-earner truly and permanently, we may all join in demanding, confident that it will also benefit the country as a whole; but the tendency to encourage the political aspirations of workingmen cannot be accepted as in the line of such reform. The appointment of workingmen to office is an expedient which fertile demagogues have used more than once to turn the attention of the workmen from real reforms.

All this does not militate against the recognition of ability and merit in a member of an organization, when such ability and merit actually exist. Some of the best appointments made under the Low administration in New York City were from the number of organization men. But workmen should scan such appointments narrowly to make sure that they are not simply bribes. Finally, it

must be remarked that the election of thoughtful and intelligent workmen to *legislative* bodies stands on a different footing from that of their appointment to *administrative* office. Legislative bodies should include, so far as possible, representatives of all social and industrial classes, but they should have in their service highly trained administrative experts to carry out their policies. Hence the efforts of labor organizations to secure representation in the municipal, state, and Federal legislatures is in keeping with intelligent and conservative labor policy.

III. THE RELATION OF THE LABORER TO THE PRODUCT OF HIS LABOR

Labor organizations strive to secure higher wages and better conditions of employment for workingmen than they would otherwise obtain, and thus to increase their share of the product of industry. But both by private employers and by economists other plans have been considered for securing to the laborer a more favorable relation to the product of his labor. Some of these plans call for discussion at this point.

1. *Piece-work Wages.*—The system of paying labor by the unit of product—or *piece-work wages*—is a modification of the usual system of *time wages*, where the laborer is paid a fixed sum for each unit of time worked. The system of piece wages can only have a fair trial in industries which allow considerable division of labor among occupations that are of a routine nature. Thus compositors in a printing-office may be paid by the thousand type set. Payment by the piece, where possible, has certain evident advantages both for laborer and employer, and has met

with very general favor or acceptance among trade-unions. But in some industries abuses of the system have been so many and so flagrant as to arouse active opposition. It has at times been used by unscrupulous employers to break down regulations and even laws limiting the hours of work, and more frequently still to bring about a reduction of wages. Thus, after the workers have attained a high rate of speed by straining every nerve and muscle to earn high wages, the price per piece is reduced in such a way that the workmen can earn by their increased exertion little if any more than they were earning before the piece-work system was introduced.

2. *The Sliding Scale.* — The system known as the "sliding scale," by which wages are made to depend upon the price of the product, has been adopted quite generally among iron and steel workers and coal miners in the United States and England. In recent years complaints have been made that employers under this system do not always truthfully declare the price of product, and other difficulties have appeared which cannot well be explained here.

3. *Profit-sharing.* — Under a system of profit-sharing the workmen in any factory, or at least a part of them, are allowed to share in the profits of the concern. A stated wage is paid, and then, at regular intervals, a part of the profits of the business is divided among the employees. There are many differences of detail which do not concern us here. Advocates of the system point out that it (*a*) *promotes economical use of materials and machinery* by employees, (*b*) generally *increases their zeal and efficiency*, and hence results in (*c*) a *larger total product* and a (*d*) *larger revenue for the wage-receivers*. Its weakness

is that it is not expedient to make the workmen bear the losses as well as participate in the gains, while the system without such a provision is likely to come to grief. Profit-sharing has sometimes been extended to include *capital-sharing*; that is, part ownership of the capital by the workmen, with some participation in the management.

4. *Coöperation*.—If industry, as ordinarily organized in our great mercantile and manufacturing establishments, may be likened to a form of *despotism*, an establishment in which workmen participate in capital ownership and management, under the chief control of one who is recognized as an industrial superior, may in the same way be likened to a *constitutional monarchy*. And finally, as opposed both to industrial despotism and to industrial monarchy, we have the third form, *industrial democracy*. Industrial democracy means self-rule, self-control, self-direction, by the workmen in their efforts to gain a livelihood. This is achieved in pure coöperation. Coöperation may have either of two forms, *coercive* or *voluntary*. Coercive coöperation, which is socialism, will be discussed in a separate chapter. Here we are concerned only with the voluntary form, which is the one that is always meant when the word "coöperation" stands alone.

Under this system the workmen combine their own capital, purchase their own plant, and manage their own industrial affairs, in their own way, at their own risk, sharing profit or loss as the case may be. At least this is the method of *productive coöperation*. *Distributive coöperation*, on the other hand, is a system of coöperation in wholesale or retail trading. Distribution is here used not in the sense in which it is ordinarily used in eco-

nomics, but in the sense in which we speak of the merchant's business as distributive.

Distributive coöperation is only an imperfect form of coöperation. Consumers of finished goods combine to purchase what they need, and thus save middlemen's profits. They form a regular stock company, subscribe for shares, employ a manager and clerks,— who often do not even share in profits,— and start a business. Profits are sometimes divided only on the shares, but the approved way is to pay a moderate interest on the capital and then divide profits among stockholders and customers. In such cases the customers share in proportion to their purchases, the division being made at stated intervals.

In England and Scotland distributive coöperation has met with very great success. Productive coöperation, on the other hand, has disappointed the expectations of its earlier advocates. France seems to have had better success than England in productive coöperation. In the United States some instances of success are recorded, and many more undertakings of the sort have been partly successful. One good example of successful pure productive coöperation is that of the three coöperative barrel manufacturing companies in Minneapolis, which together have an annual output of nearly two million barrels. In England and Scotland Wholesale Societies have been formed for distributive coöperation, thus furnishing at the same time a steady market for some important productive coöperative concerns which they have organized.

The Strength and Weakness of Coöperation.—Pure coöperation (1) *prevents strikes* by completely identifying the interests of labor and capital. It (2) *stimulates energy* and (3) *promotes economy and thrift*, since self-interest,

which usually animates only the employer, here animates all the coöperators. No slighting of work can be tolerated and, eye service vanishing, (4) much labor of *supervision is saved*. Best of all, there is (5) constant *education of the coöperators* in discipline and business detail.

On the other hand, to speak of the weaknesses of the system, (1) *divided counsels* often render the movements of such a business clumsy and slow. Action cannot be so quick and decisive as when one man acts on his own responsibility. (2) It has been hard for workmen to recognize the necessity of securing *expert talent* for the work of supervision and organization. Failure has often been due (3) to *moral defects* on the part of the workmen. (4) Finally, where success has attended the first steps of such a movement, the very *prosperity has sometimes produced dissension and disintegration*.

Arbitration and Conciliation. — We cannot dismiss this subject of the relation of the laborer to the product of his labor without a few words regarding the part that *arbitration* and *conciliation* have played and are to-day playing in the strife of interests by which the social income is portioned out. Conciliation is a term applied to the *regular efforts made by representatives of employer and employed or by a third person to prevent differences from arising or to heal such differences before matters reach an acute stage*. Conciliation *aims to prevent strikes or other labor troubles; arbitration seeks to adjust matters when acute trouble has arisen*. As is evident, conciliation is preferable, wherever and whenever it is possible.

Both conciliation and arbitration have accomplished much for the preservation of industrial peace wherever thoroughly and honestly tried. Sometimes boards are

appointed by employers and employed, and sometimes such boards are appointed by public authority. In the United States a large board with national scope has been appointed by the National Civic Federation. In this board there are representatives of labor and capital, together with other men of national prominence.

Until recently arbitration, even when public authorities have provided boards, has always been voluntary. That is, the findings of arbitration boards were legally binding upon neither employers nor employees, and therefore gained their strength from the awakening of the public interest and the enlightening of the public mind as to the merits of the dispute. Indeed, it came to be a settled conclusion in the minds of economists and others that compulsory arbitration could not be successfully attempted by government. But within the last decade compulsory conciliation and arbitration have been given a trial on a large scale in New Zealand, the successor of the United States as a laboratory of social experiment, and, according to the opinion of some able investigators, the plan has proved its value and practicability. Even those who are not convinced of the value of the system for New Zealand admit that the people after ten years of trial have no desire to return to the chaos prevailing in industry before. Moreover, in 1901, New South Wales passed a law similar in the main to that of New Zealand, after an exhaustive parliamentary inquiry into the working of the New Zealand Act. In the light of these facts the general opposition hitherto manifested toward compulsory arbitration may be lessened or possibly even changed to active support. The question may be regarded as still open.

Factory Legislation and Inspection. — Factory legisla-

tion and inspection also need a few words of comment in this connection, although the subject has been more fully treated in the chapter on the Industrial Stage in England. Labor laws, honestly conceived and properly enforced, have been productive of incalculable good. England is the model country in this respect, and in our own Union Massachusetts is the banner state. Labor legislation should be designed to keep children away from regular factory work and in the school; it should restrict to the utmost the employment of women; it should limit the hours of employment for different classes of work-people, particularly for women, young persons, and children, to the length of day prescribed by medical experience, and should secure regular and convenient hours of leisure, such as are afforded by a Saturday half-holiday; it should compel employers to fence in dangerous machinery and otherwise guard against preventable accident; and by *employers' liability* acts it should render employers pecuniarily responsible for accidents to employees. No country has ever suffered in international competition by approximation to the goal here described.

SUMMARY

1. General wages are determined by bargaining, between limits fixed on the one side by the product of the labor, and on the other by the cost of subsistence, as modified by the standard of living. The precise wage is determined by the relative strength of the two sides to the bargain.
2. Differences in relative wages are due to special conditions affecting different employments.
3. Labor organizations, a natural development of modern industry, have improved the status of labor, and have cultivated temperance and thrift.

4. Against labor-unions it may be charged that they are based on strife, that they are often short-sighted and ultra-conservative, and are forgetful of broad social interests.
5. Piece-work wages, the sliding scale, profit-sharing, and cooperation are plans that have been tried for securing to the laborer a more favorable relation to the product of his labor.
6. Arbitration and conciliation are playing an increasing part in the settlement of labor disputes.

QUESTIONS

1. How does the standard of living affect general wages? Relative wages?
2. Name the circumstances producing differences in relative wages. What is the "Iron Law of Wages"?
3. Name the different groups of laborers. Classify different occupations according to this grouping.
4. What two types of labor organization are there? Discuss the change in the public attitude toward unions.
5. What are strikes? What are their chances of success?
6. Discuss the different systems of wage payment; their advantages and disadvantages, and their success.
7. Distinguish between arbitration and conciliation. What is the present status of the question of compulsory arbitration?
8. What are some of the objects that can be obtained through honest labor legislation?

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CHAPTER IV

INTEREST

AFTER our long excursion into the subject of labor and its reward, it may be well for us to pause a moment and place in the right connection what is to follow. It should be recalled that under the general subject of distribution, or the division of the social income among the factors that have worked to produce it, we have now discussed the subject of rent, the share received by the owners of land, and wages, the share received by labor. We come now in regular order to a discussion of the share apportioned to the owners of capital. Land and labor, in their broadest sense, are the only original elements in production. Of course, as has been explained, land includes not only building lots and farming land, but also mines and rivers and fisheries, and, in short, all natural and unproduced agencies of production other than labor. Capital, on the other hand, is not a primary or original factor, but a secondary or derived one.

Unlike land, capital is produced, but it is produced for the purpose of further production. In fact, we may define capital as the *produced instruments of production*.

How Interest is Determined. — Interest is the return to capital. By what law is its amount determined? This question has been under a constant fire of discussion, and still appears to many economists as one of

the unsettled problems. The ancients in general denied that interest rested on any justifiable law. Aristotle thought it unjust, and Cicero classes it with murder. Throughout the Middle Ages it was condemned by the Church and prohibited by statute. One of the main reasons for this attitude is found in the fact that until recent centuries little capital was loaned for productive purposes. Loans were usually made for personal consumption and for the relief of the distressed. The lender could not have used the amount loaned productively, and the borrower did not desire the loan for productive uses. Despite public opinion and the law, however, the taking of interest continued customary wherever commerce was developed, and with the industrial awakening in the modern period of capitalism it was, of course, allowed as a necessity. Being allowed, it must needs be justified, and the explanations and justifications have been numerous and various. Earlier economists explained the laws of rent and wages, and then naïvely concluded that capital had what was left. The owner of capital was thus made the "residual claimant" in distribution. Others have thought that capital and land receive returns according to fixed laws, and that labor is the residual claimant. The truth seems to be that no one of the three is a residual claimant, but that each receives a return determined by fixed laws. What, then, shall we say is the fixed law by which interest is determined? In answering this question, we shall try to make a statement of the case which shall reconcile conflicting theories, at the same time that we indicate briefly what these theories are.

Demand and Supply.—In the first place, it is probable that all economists would agree that interest, which

expresses the value of the use of capital, is determined, as is all value, by the relation between demand and supply. Where there is a strong demand for a limited supply of capital, the marginal utility of the capital will be high, and the capitalist can exact a large return in the form of interest. If the demand for capital be slight relatively to the supply, then the rate of interest will be low. Manifestly, however, this does not carry us far upon our way. We must go on to inquire what it is that determines the demand and supply.

The Productivity Theory.—Investigation of the demand for capital brings us to one theory of interest which has been widely accepted,—the “productivity theory.” To the older economists, who regarded most economic questions from the standpoint of the business manager, it seemed sufficient to say that interest is paid because capital is productive, and that the amount of interest is determined by the degree of productiveness. From the side of demand we may agree that the productivity theory does give us an explanation of interest. When capital is very productive there will be a great demand for it. But while this explains in part why men *will* and *can* pay interest for the use of capital, it does not explain why they *must* do so.

The Abstinence Theory.—To understand why interest *must* be paid, we must investigate the subject of the supply of capital, and this brings us to the so-called “abstinence theory.” It has been said by some economists that interest is sufficiently explained when it is described as the wage or reward for abstinence. As we have seen, capital is the result of a special production made possible by saving. Saving or abstinence may not

in any particular instance involve any great degree of suffering. Millionnaires who do not consume at once and finally all that they have, are not thereby made to suffer the pangs of hunger. It may be that they would have great difficulty in consuming any large part of their goods. But saving does mean, none the less, the consumption of less than one might consume. We cannot have capital if all men consume all the goods that they can obtain. It may help us to understand the relation between saving and interest if we will think of actual saving as being the result of varying degrees of self-denial. There are probably many persons who would rather put by part of their present goods, even if they could not thus obtain interest, or even if they had to pay a slight amount for the safe-keeping of their savings. If very little capital were required, therefore, the interest rate might fall to zero, since those who wished to save would be glad to lend their goods with a simple guarantee of repayment. But if capital is highly productive and in great demand, it will not be possible to secure the desired capital from the savings of those whose abstinence represents no sacrifice. It may be that when more capital is demanded, an increase which will bring the productiveness of the capital and the abstinence necessary to its formation into equilibrium, may be effected at a rate of one per cent. Suppose the productiveness of the capital to be still further increased. Then those who wish to engage in productive enterprises will be able to pay a higher rate and will increase the demand for capital. But, other things being equal, those who would just save the needed amount of capital at one per cent must be paid a higher price if they are to undergo the added sacrifice necessary

to the accumulation of more capital. This explanation should make it clear that on the side of supply it is to the estimate of the *marginal investor*—the investor, or abstainer, who is just tempted to save the *marginal investment*, by the given rate of interest—that the rate corresponds. It is equally evident that all the savings that would be made for nothing, or that would be made at a lower rate, while they affect the rate very closely, do not directly determine it. We may say in conclusion of this matter, then, that interest is fixed on the side of the supply of capital at a point which just repays the sacrifice involved in the marginal investment. As has been said, this rate, thus fixed, also equalizes the sacrifice of the marginal investor with the productivity of the marginal capital in use.

The Austrian Theory of Interest.—But what is it that determines the rate which the marginal investor will regard as just repaying him for his saving or abstinence? This question finds its answer in the theory of interest which is usually associated with the name of Professor von Böhm-Bawerk, one of the leaders of the so-called Austrian or psychological school of economists. To repeat our question in another form, Why is it that men—for instance, the marginal investor—will not give \$50 now for \$50 ten years hence, even though all risk should be amply covered by insurance? Why will not the marginal investor lend his money without interest even when the loan involves no risk? Simply because desire, which is the source of value, is stronger for things near than for things far away. And for the same reason the one who borrows is willing to pay for \$50 to be repaid a year from now more than the \$50 which he borrows in the present.

Human experience in a thousand lines furnishes abundant proof of this. The wants of men are like Esau's hunger. He would rather have—he values higher—a mess of pottage *now* than a whole inheritance *in the future*. "A bird in the hand is worth two in the bush." Distant enjoyments are vague to men's minds, while near ones are vivid and tempting. Thus it is that a man will rarely give present goods for future goods in like amount, because *future goods are less valuable than present goods*.

Yet it becomes apparent on a moment's reflection that there is the greatest difference among men in the comparative estimates which they place upon the present and the future. This is in part (1) *a matter of civilization*. Thus travellers have again and again pointed out that among primitive peoples there is the utmost recklessness and improvidence of the future. Hence, among savages, if interest were demanded or allowed at all, the rate would be very high. The comparative valuation of present and future enjoyments (2) *varies widely also among civilized men*. Some there are who are almost as reckless of the future as is the savage, while there are others who would be glad to exchange a quantity of present goods for a like quantity assured to them in the future. The provident classes would therefore save even if the rate of interest should fall to a very low figure. Finally, (3) the comparative valuation varies widely according to *the affluence of the individual*. What we must have to satisfy the pangs of hunger to-day is evidently more highly valued than the same things can be when obtainable only at a future time. Other things equal, then, the millionaire will, of course, overvalue the present less than will his poorer neighbor. The man who has an income just sufficient to satisfy his

physical requirements cannot save, no matter how high the interest rate may be. And so we come back to our marginal investor, who *in the given state of civilization is of such a temperament and is of such a degree of affluence or poverty that he will just invest the marginal dollar's worth of capital when the rate of interest will repay his sacrifice, or, in other words, will make the goods which he is to have in the future equal in his mind to the goods which he abstains from consuming in the present.*

Not least among the contributions of the Austrian economists to the theory of interest has been their very complete explanation of what they call the "technical superiority" of future goods, or capital, in the work of production. The point has already been noted in the discussion of the general subject of production, but it may be well to remind the student again at this point that—to make a summary statement of it—*capital enables men to increase production by the use of natural forces which could not otherwise be used; and this use of natural forces is rendered possible by the fact that capital enables men to substitute roundabout processes for direct ones and, as a necessary incident, to lengthen the average interval of production.* Evidently, this technical superiority of future goods acts directly to stimulate the *demand* for capital.

Summary.—Let us now retrace the steps we have taken and state in summary form the theory of interest which is here developed. *Interest is determined primarily by the relation between the demand for capital and the supply of it, the rate being such as will make possible the widest possible use of capital in the existing state of demand and supply. The demand for capital is determined by its productiveness, as measured by the value of the product. The supply is*

determined by the difference in the value of present and future goods in the minds of investors. The rate is therefore fixed at a point which will bring into equilibrium the productiveness of capital, measured by the value of its product, and the sacrifice involved in the marginal investment of capital, as determined by the relative valuation of present and future goods in the mind of the marginal investor.

Interest on Different Kinds of Capital.—For practical purposes we may distinguish three special loan markets which are temporarily affected by different conditions, and within which the rate of interest may at any time be different. (1) *Long-time loans* are usually loans of producers' goods. If money is the immediate object of the loan, the borrower must convert the money into the form of capital which he desires. (2) *Short-time loans*, on the other hand, are usually loans of money for use as money. Men who have to meet money obligations want money and not goods when they borrow for the purpose. If they can only borrow other goods, these goods must be converted by the borrower into money before he can satisfy his obligations. Such loans as these are an important feature in our large cities where business notes are constantly falling due and must be met, and where the buying of stocks calls for large cash payments. Although these two classes of loans are subject to different conditions, they are bound in the long run to react one upon another. Thus, if the rate for long-time loans temporarily falls to a low point, while short-time loans command a high rate, producers' goods will be converted as rapidly as possible into money, and the money will enter into the short-time loan market, thus raising the rate in the one and lowering it in the other.

The interest paid on (3) *loans of wealth which is not capital*,

—not used for purposes of further production,—is governed by the rate of interest paid for capital. It is the same percentage of value. The obvious reason is the power of the owner to sell his non-capitalistic goods and invest the proceeds in capital goods. If we should adopt the view that houses are not capital, but simply "consumers' goods," we should similarly have the rate of interest governed by the forces controlling the rate of interest on capital.

Circumstances affecting the Rate.—There is both a real and an apparent fluctuation in the interest rate from place to place and from time to time. The apparent fluctuation is that which is due to the inclusion of insurance against risk in a single rate with the real interest. Thus loans on good security always command a lower rate than others. This simply means that a man who takes some risks as to getting his money back adds to the *pure interest* a premium to cover the risk. Gross interest, then, includes the two elements of net or pure interest,—payment for the loan itself,—and insurance against risk of loss, or of trouble in collection. Naturally, therefore, interest tends to be higher in uncivilized countries and backward communities. Again, long-time loans usually command a slightly lower rate than short-time loans, because with such loans the lender is saved the trouble of frequent reinvestment. Aside from these conditions, moreover, a steady diminution of pure or net interest occurs in most civilized countries. This last change is due, not to lessened risk, but to the change in mental comparisons between present and future goods. Present wants, being better satisfied, are less clamorous and contrast less vividly with future wants. Moreover, providence increases with

civilization. The lowering of the pure interest rate means that the great body of people are both less needy in the present and more thoughtful of the future.

Usury.—The word "usury," once applied to all interest, is now applied only to interest in excess of the rate allowed by law. The question of whether laws should be framed limiting the rate to be received and fixing penalties for violation, has been much discussed. Economists are generally agreed that the State should not attempt to establish a rate, except so far as it can confine the action of the law to loans to the needy for personal consumption. One effect of usury laws is worthy of special notice. When the law has established a fixed rate, under penalties, it may happen that law-abiding people will be unwilling to make loans at the legal rate, and that those who are willing to violate the laws will thus have an added reason for charging a higher rate than they otherwise would. Competition among lenders is lessened, and the risk of loaning is increased. Both these items act in the direction of excessive rates. Though many countries have laws designed to prevent the taking of excessive interest, the commercial world, which is regulated in great measure by the honor of the business men, commonly proceeds in disregard of the law's penalties. Those who borrow at excessive rates do so willingly and knowingly, and are in honor bound not to appeal to the law to escape their just debts.

SUMMARY

1. Interest is the reward paid for the use of capital.
2. Capital differs from land in that it is produced. Social capital consists of all producers' goods.
3. Speaking generally, interest is determined by the relation between the supply of capital and the demand for it, at a point or rate which equalizes the supply and the demand.
4. The demand for capital depends upon its productiveness, the value of its product.
5. The supply of capital depends in general upon its cost of production, i.e. upon the sacrifice involved in the abstinenace of the marginal saver or investor.
6. The cost of abstinence arises from the fact that men regularly value more highly the present as compared with the future, and the cost is therefore measured by the extent of this higher valuation.
7. Capitalistic production is more productive than non-capitalistic production because it enables men to substitute indirect processes for direct ones, and thus enables men to use natural forces.
8. Long-time loans and short-time loans, while affected by different sets of conditions, tend to have the same rate of return, and this rate is also that for the loans of other goods which are not capital.
9. The interest rate, as ordinarily stated, really measures the return for risk as well as the return for capital, which is pure interest. Both gross interest and pure interest tend to fall with advancing civilization.
10. Usury, now applied to interest in excess of a legal rate, is frequently made subject to penalty. Such penalty, however, usually has the effect of raising rather than lowering real interest.

QUESTIONS

1. What are the differences between capital and land? The resemblances?
2. What is interest? How was the taking of interest regarded in early times?

3. What is the supply and demand theory of interest? What is the productivity theory? What element of truth does it contain? What is the abstinence theory? What element of truth does it contain? What is the Austrian theory? Are these theories necessarily contradictory?
4. State in summary form the complete theory of interest.
5. Why is it right to say that the cost of capital is abstinence? What is meant by marginal investment? How do relative valuations of present and future compare in the case of children and adults? Of children and savages? Of rich and poor? What relation has this to interest?
6. Show in detail the services rendered to production by capital.
7. What different loan markets are to be distinguished? How does the interest rate in the first affect that in the second? How is the "rent" of houses determined?
8. What two elements are there in the ordinary interest rate? What is pure interest? What two reasons are there for a fall in the interest rate with advancing civilization?
9. What is usury? What are usury laws? In what case are usury laws beneficial?

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All standard works on Economics discuss these topics.

CHAPTER V

PROFITS

ECONOMISTS recognize a fourth regular share in the distribution of the social income, though they have not been agreed as to precisely what this share consists of, or as to how it is determined. Some writers have used the word "profits" to denote the total return to the entrepreneur from the sale of his product, after the payment of wages for labor employed and a further payment for land and capital hired. It is evident, however, that this return is not a simple one, but contains payments for several elements which call for separate treatment. We shall therefore speak of this return as *gross profits*, and inquire of what it consists, thus leading the way to an understanding of the net return which may be called *pure* or *net profit*.

I. **Rewards to Other Factors of Production.**—1. *Interest.* In the first place, it is evident that the return which the entrepreneur receives is in part due to the factors of production which he himself owns and uses in the business. The return to his capital invested is really interest, as truly as if it were to be paid to another person who owned the capital instead of to the entrepreneur owner himself. In estimating *net profits*, therefore, careful bookkeeping will deduct from *gross profits* interest on capital invested by the entrepreneur.

2. *Rent.*—The same thing, of course, holds true of land owned by the entrepreneur. Rent should be charged off in the same way as to an outside owner.

3. *Wages, including Wages of Superintendence.*—The element of wages and salaries of every sort, including a *regularly estimated amount for the entrepreneur himself*, should also for scientific purposes be separated from gross profits in the calculation of net profits. Private and public corporations do this regularly, and the practice is frequent in those large non-corporate businesses in which the entrepreneur is employed just as is any other laborer.

II. **Charges of Maintenance.**—1. *Depreciation Fund.* In the second place, deduction must be made from gross profits of a sum sufficient to provide for the maintenance of the capital, or its replacement, as it is gradually used up, or as it is suddenly destroyed. Modern business book-keeping commonly provides for the replacement of *gradual impairment* by keeping a separate account for what is called a *maintenance* or *depreciation* fund. A man is facing business ruin who takes and consumes as profits from his plant what should be set aside for its replacement.

2. *Insurance.*—The same may be said of the payment to provide against risk, which may be called *insurance*. The amount of money which a careful business man sets aside to secure himself against loss is not profit. Insurance in this sense is much broader than insurance against fire, hail, etc., for which a policy may be taken out and a definite premium paid. It must be noticed that when a separate charge is made to cover such risk, the allowance for interest on the capital must leave out the part due to

risk which we have seen to be present in gross or market interest; in other words, the interest will in such a case be the *pure* interest.

III. *Extra-personal Gains*.—1. *Monopoly Gains*. Even with all these deductions, the analysis is not complete. We must, in the third place, deduct *extra-personal* gains—gains which are not due to the efficiency of the manager. One of these sources of gain lies in the possession of a monopoly advantage. Monopoly gains are a separate item in distribution, and if they are to be called profits, as they frequently are, we must carefully distinguish the particular nature of such profits.

2. *Conjunctural Gains*.—Closely resembling monopoly gains in certain respects is a class of gains known in recent discussions as *conjunctural*. As the name indicates, these are extra-personal gains resulting from a favorable conjuncture of circumstances *which could not have been foreseen*. A simple instance of such a gain is seen in the profits made by retail dealers when the sudden death of a great personage creates unusual demand for mourning goods. That this happened in many American cities at the time of the death of President McKinley is shown by statements in the press of those places. Stocks of black goods which the merchant may have censured himself for accumulating may suddenly become the source of a considerable conjunctural gain. Here, however, a very real difficulty presents itself. In instances like that just mentioned, the conjunctural element can be plainly distinguished. But it often happens that such gains are at least in part the reward of foresight and energy, and are therefore to be classed as pure or net profit. The man who makes a fortune by buying up suburban property in an unlikely

neighborhood, because he has had sufficient sagacity to foresee growth of population in that direction, may claim with some reason that his gain is not conjunctural. Even more reasonable would his claim be if, after buying the property, he himself directed the movement of population in that direction by securing improved rapid transit facilities and by other familiar expedients. In real life all the stages between clever business foresight and pure conjecture are to be observed.

IV. Pure or Net Profits.—Our analysis, then, gives us as our concept of pure or net profits all that is left after deducting the items mentioned. Of course it will be understood that not every business shows in its gross profits all these different items. Sometimes it may even happen that there need be no further deductions than those for wages and a maintenance fund. But some of the other items are usually present in the estimate of gross profits.

Society must at any time pay for its goods a price sufficient to give even the most inefficient manager whose services are necessary to the production of the supply, an amount covering the items other than net profits. But no pure or net profits will accrue to such a *marginal entrepreneur*. More efficient managers will, therefore, be able to secure *differential profit*, the amount of the differential in every case being determined by the extent to which these entrepreneurs individually surpass in efficiency the entrepreneurs of only marginal efficiency. Pure or net profit, therefore, is a purely personal gain—a return to superiority of management as such, independently of monopoly advantage, favorable conjuncture, or the mere labor of the manager as a superintendent.

Summary. — Let us summarize diagrammatically the considerations just presented : —

GROSS PROFITS	Reward to other factors of production	{ Interest on entrepreneur's capital. Rent of entrepreneur's land. Wages for entrepreneur's service.
	Charges of maintenance	{ Depreciation fund charge. Insurance fund charge.
	Extra-personal gains	{ Monopoly gains. Conjunctural gains.
	Net profit — Personal gains	{ Differential or pure profits.

Pure Profit and Rent Compared. — This explanation of the determination of pure profit as a surplus due to the superiority of a given entrepreneur over the marginal or poorest entrepreneur who can afford to stay in business at the current price of the product, is, as the student will doubtless have noticed, strikingly like the explanation of the determination of rent. Thus, *while wages and interest are price determining*, entering into the price of the product, *rent and profits are price determined*; they do not enter into the price of the product. Pure profit has hence been called, not inaptly, *personal rent*, or the rent of superior managing ability. Again, as with rent, it is interesting to notice the corollary that it is not the able managers, receiving large pure profit, any more than the fertile land, receiving large rent, that make the prices of commodities high. If all land were of the highest grade of fertility, the price of produce would be lessened; and in the same way, if all managers were of the same order of talent as our ablest managers, goods would be produced at a lower marginal expense, and society would reap the benefit in lower prices. But there is this marked difference between the rent of land and pure profits. The more fertile lands can exercise little influence in raising the quality of inferior soils, while superior entrepreneurs are always tending to make the knowledge and

skill requisite for success a matter of common property. As business becomes more completely organized, falling more and more into routine; as knowledge becomes more widely diffused throughout the business community; and as governments improve in regularity and firmness and honesty, the marginal expense of production and the resulting prices tend to fall, and profits in consequence tend to lower and lower limits. It is in this sense that profits may be spoken of as "the lure that insures improvement."

Pure Profit and Monopoly Gains Contrasted.—Under sharp and increasing competition, pure profit rests upon a precarious foundation. If the special ability upon which the profit depends is such as cannot be duplicated, the profit will perish with the single possessor; if the special ability can be duplicated, rival concerns will possess themselves of entrepreneurs of equal efficiency, and the special advantage tends to disappear through competition. But, as we have said, there are certain permanent extra-personal advantages, entirely equivalent otherwise to natural ability, which may become the exclusive and permanent property of a business organization. In case of such possession, competition is either entirely impossible or it is possible only on terms which give to the holder of the monopoly advantage a considerable differential return. Such monopoly advantage exists in the possession of peculiarly favored spots or lines of land, or of exclusive guaranteed privileges, etc. When such an advantage is enjoyed, the power of competition over price is removed; prices no longer stand at the point of cost; and a surplus over rent, wages, interest, and profits is a regular result. Unless interfered with by legislation, there could be no outside influence to prevent a monopoly

asking any price it pleased, subject only to the action of the law of monopoly price which has been explained in the chapter on Monopolies.

Another sharp contrast between pure profits and monopoly gains lies in the fact that whereas pure profit is a surplus *produced by superior efficiency*, and is in so far no burden to the community,—which, indeed, tends to gain by it in the end,—monopoly profit, on the other hand, is a surplus *extorted by power and privilege*, and is usually a source of loss to the community. Distribution of wealth is coming increasingly under the influence of monopoly. The economic surplus taken by monopoly is the source of many of the largest fortunes of our day, and is one of the main causes of the growing inequalities of fortune, especially since our Civil War. *While, in general, competition increases in severity, an increasing proportion of the industrial field is withdrawn from competition and falls under the control of monopoly.*

Capital and Capitalization.—In considering monopoly gains, it is important to understand the distinction between capital and capitalization. *Capitalization means the amount at which a business or property is valued.* The word is therefore used in the language of the market in two ways. It is sometimes used to describe the par value of the stock and other securities issued by the company, as representing the *company's nominal valuation* of the business and its earning power. And it is also used to denote the market value of the business or of its securities taken as a whole. Thus a company may be capitalized at \$10,000,000 in the sense that its securities have that par value, while the market estimate of the value of the business, as reflected in the prices paid for its securi-

ties, may be much less or much more than \$10,000,000. Capitalization in either of these two senses may be many times the amount of capital actually invested, since it is based not on investment or material cost, but upon earning power.

When we speak of current interest as being 5 per cent, we mean that free and disposable capital can regularly command that rate of return in competitive industry. Let us suppose that the return on investments that are open to all is about 5 per cent, but that the annual return to a great oil company, which has actually invested \$100,000,000 in the business, is 50 per cent. The business may in that case be capitalized at \$1,000,000,000, in such a way that the great earnings on the *actual investment* will appear as only 5 per cent on the *capitalization*. To those who are ignorant of the difference between capital and capitalization, monopolies can often, by such a plan as this, appeal successfully for sympathy and support on the ground of insufficient earnings, even when the return on their actual investment is many times the market rate.

As profits on new investments in competitive industries fall, the capitalization of monopoly earnings may be raised in proportion, even without the investment of new capital. For instance, if a monopoly has an earning power of \$50,000 a year, the capitalization of this return at 5 per cent would stand at \$1,000,000. If, then, the current rate of interest should fall to 4 per cent, while the monopoly earnings suffered no change, the capitalization of the monopoly, represented by the *market value* of its securities, would rise to \$1,250,000.

And yet it must be remembered that the owners of the

stock of monopolistic businesses often include many persons who have paid on the basis of the capitalized value, and who do not therefore receive from the monopoly a greater return than they would receive from investments in competitive industry. It is those who "get in on the ground floor," and who are thus enabled to sell at the capitalized value stock which they have received on the basis of actual investment, who divide among them the capitalized monopoly earnings.

SUMMARY

1. The word "profits" as ordinarily used in business often includes many elements of income which are not really profits. The total surplus left in the employer's hands after the payment of contract wages, rent, and interest should be called gross profits.
2. To obtain the net profits of a business there must be subtracted from the gross profits (1) a normal return for the employer's own capital, land, and services, i.e. interest, rent, and wages of superintendence; (2) charges of maintenance, including depreciation and insurance; (3) extra-personal gains, including those arising from monopoly or from chance.
3. The remainder, or the pure net profit, is a differential return due to the superior ability of the entrepreneur, and is in many respects comparable to rent.
4. Pure profits tend to diminish, other things being equal, as education becomes more widely diffused and as industry becomes more completely organized under regular routine.
5. Monopoly profits, on the other hand, have a more permanent character in the absence of government interference.
6. Under the modern conditions of business, monopoly profits are disguised by their form of capitalization.

QUESTIONS

1. What are gross profits? What is the difference between gross profits and pure profits?

2. Name the deductions that must be made from gross profits to arrive at net profits.
3. What three deductions should be grouped together? What other two groups? What is the basis of this grouping?
4. What is meant by wages of superintendence? Some writers call wages of superintendence marginal profits: explain.
5. What is the depreciation fund? Insurance fund?
6. What are the two classes of extra-personal gains? What is meant by the word "conjunctural"? Mention instances of conjunctural gains that have fallen under your observation or that you have met with in reading.
7. What caution must be observed in estimating conjunctural profits?
8. Why are pure profits like rent? How do pure profits and rent compare as to their tendency to increase or decrease? What effect does competition have in the long run on pure profits? On monopoly profits?
9. Why is it that monopoly profits often appear to be only equal to the normal interest rate? What bearing does this have upon popular opinion regarding monopolies?
10. What is the difference between capital and capitalization? Explain the process of capitalization.
11. What is the effect of a falling interest rate upon the share of the social income that goes to monopolies? Why? What is the effect upon the value of a monopoly privilege?
12. What bearing has this upon the question of the attitude which the people should assume toward monopolies?

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Some of the questions treated in this chapter have been the subject of constant discussion in the newspapers and magazines of recent years.

CHAPTER VI

SOCIALISM

The Relation of Socialism to Distribution. — In the foregoing chapters we have explained how in the existing social organization the annual produce of industry — the social income — is distributed. As was stated at the beginning, the method of distribution is intimately dependent upon the legal structure of society, and particularly upon the laws of property. Society, as it exists in all advanced nations, accepts private property as its industrial basis. In other words, in the greater part of goods, private proprietorship or private appropriation is not only permitted but encouraged, and the result is the system of distribution which has been described.

Considerable differences in property laws exist among different nations, and minor changes are constantly being made; and these differences and changes result in corresponding differences and changes in distribution. It would take us too far afield to attempt to treat these in detail. But socialism, which is a plan to overthrow the very foundation of our existing industrial organization, has been so seriously proposed and discussed, and has to-day so many enthusiastic advocates, that we cannot pass it over in silence in our analysis of economic theory.

Such a fundamental change as socialists propose would, as will appear in the following pages, profoundly affect

every one of the four phases of economic activity which we have chosen as the natural divisions of economic analysis,—consumption, production, exchange, and distribution. But socialism has been proposed more especially as a remedy for existing evils in the distribution of the social income, and we may therefore properly treat the subject under that head. It may be noted in passing, moreover, that in general discussions of the proposed change, it is a common assumption that labor and wages would be especially affected, and socialism is therefore often treated in direct connection with the subject of wages and plans for improving the status of labor.

General Characterization.—In the chapter on Wages and the Labor Problem we have described some of the various changes in the relation of the laborer to the product of his labor that have been tried or proposed. It was there pointed out that one of these plans, coöperation, may be either voluntary or coercive,—that is, ordered and controlled by the State,—and it was further stated that coercive coöperation is but another name for socialism. What, then, is socialism? It is coercive coöperation, not merely for undertakings of a monopolistic nature, but for all important productive enterprises. Socialists seek the establishment of *industrial democracy* through the agency of the State, which they hold to be the only means of attaining their end. They would expand the business functions of government until all the dominating kinds of business are absorbed. They would have all such business regulated by the people in their organic capacity, every man and every woman having essentially the same rights that any other man or woman has. Our political organization would become also an industrial organization, with universal

suffrage. Private property in profit-producing business and rent-producing land would be abolished, though private property in incomes would in the main be retained. What is desired by the socialist, then, is not, as is supposed by the uninformed, a division or diffusion of property, but rather a further concentration of a very large part of property. The socialists do not complain because productive property is too much concentrated, but because it is not concentrated enough. They therefore rejoice in the formation of trusts and combinations, regarding these as a development in the desired direction.

The Four Elements of Socialism.—There are four characteristic elements in pure socialism: first, the *common ownership of the means of production*; second, the *common management of the means of production*; third, the *distribution of the product of industry by common authority*; fourth, *private property in the greater part of income*. Socialists make no war on capital, strictly speaking. What socialists object to is not capital, but *the private capitalist*. They desire to *socialize* capital and to abolish capitalists as a distinct class by making everybody, as a member of the community, a capitalist; that is, a part owner of substantially all the capital in the country.

In support of this plan, socialists generally claim that labor creates all wealth. No rational socialist means by this to deny that land and capital are factors of production; but as these are only passive factors, the socialist holds that the owners of those factors should not receive a share of the product simply through such ownership. Man is the only active factor, and all production is carried on for the sake of man. Socialists admit that with industry organized as at present, the owners of land and

capital must receive a return for them; hence they desire that these tools should become social property.

Distributive Justice. — The central aim of socialism, its pivotal point, is *distributive justice*. While it seeks to increase production by more efficient organization and methods, it makes its central thought the just distribution of the product. The ideas of socialists as to what constitutes justice in distribution are not harmonious. Some say that (1) *equality* meets the demands of justice; others, (2) *distribution in proportion to real needs*, so that each man may have the economic means for his fullest *individuation*, or development; while still others say that justice demands distribution (3) *in proportion to merit or service rendered* — but the *service of the individual, not of his ancestors*.

Socialism an Extension of Existing Institutions. — Our government owns and manages the postal service; nearly all governments own the telegraph; nearly all own the wagon roads; some own canals and railways; many even own factories, and probably every national government does at least a little manufacturing; many of them also cultivate forests, and some cultivate arable lands. In brief, we may say that governments already touch the business world in the following ways: (1) *they protect person and property*; (2) *create and guarantee certain special privileges and franchises*; (3) *regulate the terms of contract and of competition*; (4) *participate in private enterprises by favorable tariffs, bounties, subsidies, land gifts, etc.*; (5) *carry on certain industrial processes*, such as the building and maintenance of roads, parks, lighthouses, telegraph, money coinage, etc. To picture to ourselves socialism pure and simple, therefore, we have only to

imagine an extension of what already exists until a point is reached where society, through its government, cultivates the land, manufactures the goods, conducts the exchanges, and in short carries on most *productive enterprises*. Only such private industry would be permitted as would not threaten the dominating power of society in production and distribution. Thus individuals would probably be permitted to cultivate small areas of land, and there might exist here and there a private press supported from private income.

Not all Public Business is Socialistic. — It must be observed that not every public activity in relation to industry is socialistic. Properly speaking, *that only can be considered socialistic which tends to render government dominant in all production.* Does any proposed measure tend to the suppression of production by individuals or by voluntary coöperation, and to the absorption of production by government? Then it is socialistic; otherwise it is not. This is the only way to distinguish between socialistic and non-socialistic, or even anti-socialistic measures. It furnishes us with a rational basis for judgment. Are compulsory education and free schools socialistic? By our test they are decidedly anti-socialistic. By developing capacity for self-help, they enable those who grow up under their influence to make the best of existing institutions. They are a conservative force. Is municipal ownership of gasworks, electric-lighting works, or other natural monopolies, socialistic? No; for they are in line with the modern tendency to separate sharply the proper industrial functions of private persons from the proper industrial functions of the politically organized community. There is a sound principle — not

socialistic — underlying the modern tendency. The conviction is gradually being forced upon us by science and by actual experience that most of those industries which are natural monopolies must in the end be owned and operated by government, and that outside the field of natural monopoly there is a sharply defined territory in which business can flourish only in the atmosphere of private enterprise and competition. If we separate thus frankly and rationally the private from the public industrial sphere, we lay the strongest possible foundations for the existing industrial order, instead of allowing things to drift haphazard into socialism or chaos.

Socialism makes perhaps its strongest claims in its plea, first, for a *scientific organization of the productive forces of society*, and second, for a *just distribution of the social income* from production.

1. *The Relation of Socialism to Production.*—When the opponent of socialism objects to that system on the ground that more equal division of the social income would result in pitifully small portions for individuals, the socialist replies: "There is little to divide now, naturally enough. Competition is wasteful. Two railways run where one would suffice. Three times as many milk wagons, horses, and drivers are required to serve the people with milk as would suffice if the milk business were organized on the plan of the mail-distribution business in cities. Look at the stores, wholesale and retail, and note the waste of human force. Millions of dollars are annually expended in advertising, which would be saved in the socialistic state. Without competition the whole drygoods and grocery businesses could be carried on with a third of the present expenditure of economic energy. Reflect, too,

on all the idle classes in society, the idle rich and the idle poor. Socialism would find a place for every one, and would put every one in his right place, and by making each one dependent on his own exertions for success, would stimulate all energies." The socialistic argument, continued indefinitely after this same fashion, is a really telling one. It does not prove the point, however, unless we grant three things : first, *that present waste and idleness cannot be suppressed or greatly diminished* without departing from the fundamental principles of our existing industrial order; second, *that in the advantages of competition there are not social gains which more than outweigh the social losses just described*; and third, *that socialism is practicable*.

2. *The Relation of Socialism to Distribution.*—*Distributive justice* also makes a strong plea for the programme of socialism. It cannot be claimed for one moment that every man's income is now proportioned to his social service. Income in proportion to merit appeals to our sense of right and fitness ; but cannot we approach more nearly to that than at present by social reform, without going to the length of social reorganization? No doubt the idle man is morally a thief. He receives, but gives in return no personal effort. Any man who has not earned the right of repose by his own past services, with fruitful mental or physical toil, is a shameless cumberer of the earth, unless, indeed, he is incapacitated for useful employment. Would the world suffer by your death? That is the test. If you merely clip coupons, no one would miss you.

Social Obligations of Wealth.—We may take hope from the fact that men everywhere are coming to recognize the

social obligations of the individual. Dr. James Fraser, late Bishop of Manchester, England, expressed the idea in words the essential thought of which is as follows: "Most of us are compelled by our necessities to render service to our fellows. Some of us, however, have inherited or received money in some way without a return on our part. We are placed by God on our honor. It becomes a matter, not of physical compulsion, but of honor with us to serve our fellows." What is here said would apply also to those who become wealthy through the accidental discovery of valuable treasures, such as oil, natural gas, or gold on or under the soil which they own, or through the growth of cities, which adds immensely to the value of favored land. Were you to receive an accession of wealth in such a way, the wealth would be yours in the eyes of the law, but morally it would be simply a new opportunity to help forward the progress of humanity. It is the growing realization of this idea that is leading American men of wealth to endow so generously universities and other institutions for the public welfare. This idea is contained in the now famous epigram of one of our wealthiest manufacturers, "To die rich is to die disgraced."

3. and 4. *The Relation of Socialism to Exchange and Consumption.*—We cannot take the space necessary to point out all the economic changes that would appear in a socialistic state. It must suffice merely to note that exchange and consumption, as well as production and exchange, would be revolutionized. A credit economy might entirely supersede our present mixed money and credit economy, and socialism, to be consistent, would have to make exchange values accurately proportionate to costs in human labor and other sacrifice. Moreover,

equitable distribution of a largely increased product, if it could be achieved, would of course be reflected in the amount and character of goods consumed. Particularly, it may be supposed that inclusive, as contrasted with exclusive, enjoyment of wealth would fill a much larger place in the life of a people socialistically organized.

The Weaknesses of Socialism. — In considering socialism as a scheme for social reconstruction, a number of difficulties suggest themselves. Prominent among these is (1) the probable numbing effect of the system upon individual initiative and energy. What motive to activity can take the place of the desire for individual and family advancement through the accumulation of private property? Another very grave difficulty lies in (2) the introduction of the requisite unity in the organization and management of industry. In some industries where the work is of a routine nature, the problem of organization may not be impossible of solution. But what shall we say of such industries as agriculture, which has hitherto resisted all efforts at centralization? In the third place, (3) the socialist state would have the herculean task of apportioning work of all conceivable degrees of difficulty and disagreeableness among the workers. How could this be accomplished without engendering a universal discontent that would be fatal to the plan at its very inception?

Again (4) the danger to personal freedom under the proposed system seems a very real one. Up to a certain point, it is true, government seems to improve as its functions increase in number and importance. But would this hold true indefinitely? We may even grant, for argument's sake, that as our very livelihood would depend on the efficiency of government, all the force and energy that are

now expended in private service would be diverted into public channels. But what would happen if, in spite of all precautions, some unscrupulous combination should secure control of government? Would there remain, inside or outside of the government, standing ground for effective, yet peaceful, opposition? It is to be feared that there would not. Dissatisfaction would exist, for human nature is such that man cannot be thoroughly satisfied with his surroundings. The danger is that without proper means for its expression, this dissatisfaction would grow and spread beneath the surface of society until, having no other vent, it would at last break out in revolution.

Finally, we may lay it down as a general rule that (5) the domination of a single industrial principle is dangerous to civilization. Many writers have pointed out that it was the domination of a single social principle that led to the downfall of older civilizations; and a distinguished American — the Hon. Andrew D. White, in an excellent address entitled "The Message of the Nineteenth Century to the Twentieth" — has expressed the fear that the private business principle, with the "mercantilism" that naturally attends it, seriously threatens American civilization. What is needed is a coördination of the two principles,— the principle of private and of public business. It is desirable that some should serve the public in an official capacity — some men are specially adapted to that work; but it is equally desirable that an ample field should be left for those who prefer private initiative and activity. Our present system, much as it may need reform, offers opportunity for the coördination of the two principles; socialism would not do so.

But it is as difficult to predict the ways in which social-

ism would fail as it is for the socialist to say definitely just how it would work, and this suggests their real weakness: they venture to predict the course of economic evolution too far in advance. Certainly we must have ideals and look to the future, but we are unable to say very far in advance what will be the best means for attaining them. The hope that a juster distribution of wealth will prevail and that income will more and more represent social service, is cherished by many who do not call themselves socialists, and who believe it wise to concentrate their efforts on practicable social reform.

Our Debt to Socialists. — Socialists have rendered society a real service by calling attention to pressing social problems; by forcing us to reflect upon the condition of the less fortunate classes; by quickening our consciences; by helping us to form the habit, not yet generally acquired, of looking at all questions from the standpoint of public welfare and not merely from that of individual gain; and finally, by calling our attention to the industrial functions of government, thus leading us and aiding us to separate rationally the sphere of private industry from that of public business.

Socialism not Anarchism. — Socialism has been described as industrial democracy established and controlled by government. It is evident, therefore, that the socialist would give to government the greatest possible power. At the opposite extreme stands a proposed system which is strangely enough often confused by the ignorant with socialism. *Anarchism would do away with government entirely, leaving all activity to individuals acting voluntarily: socialism, as we have seen, would lessen the sphere of individual initiative, leaving the greater part of industrial*

activity in the hands of government. In the main, therefore, anarchism and socialism are antithetical. Yet there are some anarchists who believe that were government abolished, individuals would freely and of their own accord form coöperative groups which, federated, would manage all production. Anarchy is, in the minds of most thinking people, repulsive and inconceivable. Events of recent years have given a certain morbid interest to the cult which it is not well to encourage.

Communism and Socialism. — *Communism* is a term not much used in recent writings. In the past it was employed to designate an extreme kind of socialism. Communism called for equality of possessions and income, without much regard to the matter of the regulation of production. Some writers have used the word "communism" to designate violent schemes of radical social reform in distinction from more peaceful and conservative plans of reconstruction, which they designate by the name socialism. Yet all the communistic societies in the United States are composed of peace men, who do not believe in war, and even preach non-resistance to aggression. It is as well, perhaps, to abandon the attempt to make a distinction between communism and socialism, by simply dropping the word "communism."

Other Names for Socialism. — *Collectivism* is a name which many socialists of recent years have favored to designate their programme. They have sometimes chosen the name in order to escape the odium which the ignorance of past years has laid upon the older word. Other names used to describe socialists in one or another of their groups are: *Fabian Socialists*, the name applied to a group of English socialists and their followers who have

as their rule of action "Make haste slowly"; *Christian Socialists*, the name applied to those who base their argument and their hope upon the Christian gospel; *Scientific Socialists*, the name applied to the followers of Karl Marx, who in his great work, *Capital*, aimed to show that socialism is destined to come in its time, whether we will or no, through the evolution of great underlying forces in industrial society.

Perhaps the greater part of political socialists in Europe and America — socialists who have a political programme and regularly support their socialist candidates for office — are Marxists. But the name under which the political movement has made the greatest progress in Europe, and especially in Germany and Belgium, is Social Democracy, the partisans being known as Social Democrats.

Present Status of the Socialist Political Movement. — Socialism as a practical political movement has been making surprisingly rapid strides in Europe within the last decade. It is impossible to make an accurate estimate of the aggregate number of political socialists at the present time, but certain figures are available which indicate in a general way the rapid growth and present status of the party. Thus in the German Empire the number of votes cast for socialist candidates for the Reichstag rose in the sixteen years, 1887 to 1903, from 763,128 to 3,011,114, which represents a change from 10.1 per cent to 31.7 per cent of the entire vote of the Empire. The party has 81 representatives in the present Reichstag. In the Reichsrath of Austria-Hungary, 10 seats are held by socialists. The Danish socialists in 1903 polled 55,479 votes, and elected 16 members to the National Parliament. In Italy the number of socialist deputies in Parliament rose

between 1893 and 1900 from 5 to 33. In Belgium, where the movement has in some respects had its greatest success, the total vote rose from 335,000 in 1894 to 476,862 in 1902, the number of representatives in the National Parliament at the same time increasing from 32 to 84. The strength of the movement in France cannot be shown so easily on account of the numerous factions into which the party is split up ; but the fact that M. Millerand, a socialist, found a place in the Cabinet formed in 1901, is perhaps more significant than many figures. In England, where large parties have always been few in number, socialism has shown a strong tendency to avoid the ordinary political channels. The same is true of the United States, though in recent state elections, and even more in municipal elections, surprising gains have been made by politically organized socialists. In 1902 the total socialist vote in state and Congressional elections was 283,525.

SUMMARY

1. Socialism is coercive coöperation in production.
2. Socialists would permit private property in income, but not in means of production.
3. Socialists claim that labor produces all wealth, and they aim at a distribution based on justice.
4. Socialism is but an extension of existing institutions.
5. The strength of socialism lies in its proposed saving of waste, in its proposal for juster distribution, and its demand for the recognition of the social obligations of wealth.
6. Its weakness lies in its requirement of impossible human virtues.
7. Anarchism is really the opposite of socialism.
8. There are many differences of view among socialists, these differences giving rise to distinct names for the different groups.
9. The political socialists have increased rapidly in number in Europe during the past fifteen years.

QUESTIONS

1. Define socialism: anarchism. What is Christian socialism? Evolutionary socialism? Fabian socialism? Name prominent poets and novelists who belong to one or another of these schools.
2. How far does socialism do away with private property?
3. What effect would socialism, if successful, have on production? On distribution? On exchange? On consumption?
4. What difficulties stand in the way of the realization of socialism?
5. Why is it not right to say of every public interference in industry that it is socialistic? When may a measure be called socialistic?
6. What is the origin of wealth according to socialists? Discuss this claim.
7. Why is anarchism not feasible?

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BOOK IV

PUBLIC FINANCE

CHAPTER I

EXPENDITURE AND REVENUE

I. INTRODUCTORY REMARKS ON THE NATURE OF PUBLIC FINANCE

Definition of Public Finance. — Public finance is *the science, or the branch of economics, which deals with the revenues and expenditures of government, and with the administration of such revenues and expenditures.* The name must be carefully distinguished from *private finance*, which deals with the revenues and expenditures of an individual or a private business, and from *corporation finance*, which deals with the revenues and expenditures of private corporations. The student is also cautioned against referring the word, as is often mistakenly done, to the subjects of money and banking, which belong to another part of economics.

Early treatises in English economics usually had no special part devoted to public finance, but included some observations on taxation in the treatment of other general topics. It is true that the difficulty of saying anything satisfactory about a subject so vast, within the scope of a few pages, is a serious one; yet it does not seem scientifi-

cally satisfactory to pass over one of the most important economic topics, even in an elementary treatise. We shall therefore attempt to give some impression as to the nature and scope of public finance, while reminding the student that later and more careful study of the subject should be carried on with the help of some regular text-book entirely devoted to it.

The Magnitude and Influence of Public Business. — Government business is the largest single business in every great nation. In the United States to-day, a few men have fortunes of upwards of \$100,000,000, and we rightly regard these fortunes as colossal; yet the annual *revenues* of the various governments in the United States—Federal, state, and local—are about four times the probable upper limit of such fortunes, being about twelve hundred millions.

So vast and so permeating is government business that it affects vitally all other businesses. If our government should have a large surplus every year, and should keep it out of circulation, we should shortly have a stringency in the money market that would result in a terrible panic. This is one of the reasons why a surplus Federal revenue presents so difficult a problem. The United States alone among nations locks up any considerable part of the public revenue. Under our independent treasury or "sub-treasury" system, a large part of the Federal revenues flowing into our subtreasuries can regularly get out only in payment of claims against the United States, whereas other governments bank all or nearly all their revenues in regular banking institutions, and hence do not take the money out of circulation.

Still another feature of government business has an

important bearing on all private business. Government to-day is the largest single employer of labor, and hence profoundly influences the conditions of employment elsewhere. It is largely for this reason that labor organizations have worked to secure the passage of many laws regulating the hours and other conditions of employment in government work.

Different Views of the Economic Functions of Government.—It is clear that the dominant idea of the true function of government will determine the character and extent of government business. In an anarchist society—if there could be *society* in anarchy—there would be no public finance. In a State limited to the functions allotted to it by the extreme individualist, public finance would be relatively insignificant. In a socialist State, public finance would so overshadow private business and private finance that economics and public finance would almost become names for the same thing. The character and scope of government business in the modern State will appear in the following pages.

II. PUBLIC EXPENDITURE

The Magnitude of Public Expenditure.—The importance of public finance becomes more apparent when we consider the magnitude of government expenditures in modern times. The fact has often been cited that England's expenditure increased forty-fold between 1685 and 1841, while her population was increasing only threefold; but this is only one of hundreds of equally significant facts. The French *budget*—the name applied to the *detailed statement of revenues and expenditures*—showed expenditures of a thousand million francs, or about \$200,000,000

in 1821 for the first time, and the result was widespread alarm; yet no French budget since that time has called for smaller expenditure, and to-day the total annual expenditure of France and her minor governmental divisions amounts to about \$1,000,000,000. The annual *national* expenditure of Great Britain, after a slight decrease following the Napoleonic wars, has increased quite regularly since, rising from about \$235,000,000 in 1833 to a little over \$500,000,000 in 1898, just before the outbreak of the South African War.

Growth of Expenditure in the United States. — The following table shows a similar increase in the Federal expenditures of the United States :—

EXPENDITURES OF THE UNITED STATES

YEAR	ORDINARY EXPENDITURES	INTEREST	TOTAL	PER CAPITA
1792	\$ 5,896,000	\$ 2,373,000	\$ 8,269,000	\$ 2.04
1800	7,411,000	3,402,000	10,813,000	1.17
1820	13,134,000	5,151,000	18,285,000	1.90
1840	24,139,000	174,000	24,313,000	1.42
1860	60,056,000	3,144,000	63,200,000	2.01
1870	164,421,000	129,235,000	293,656,000	6.80
1880	169,090,000	95,757,000	264,847,000	5.28
1890	261,637,000	36,099,000	297,736,000	4.75
1900	447,553,000	40,160,000	487,713,000	6.39
1902	442,082,000	29,108,000	471,190,000	5.96
1903	477,542,000	28,556,000	506,099,000	6.26

Causes of Growth. — It must not be thought that this great increase in public expenditures is due to recklessness or dishonesty. Probably, on the whole, government has improved during the last century; and it is significant

that where government is most undoubtedly honest, there have been larger increases than in many other quarters. The explanation of the increase is not difficult. In the first place, we must remember that population has been increasing more rapidly than ever before, and that increase in aggregate expenditure does not mean a proportionate increase in the burden borne by individuals. But beyond this, we must conclude that government activity, while wiser than before, is also more extensive and important. Public schools, provision for public health, public parks, public baths, public libraries, all show the greatly increased range of State activity in modern times. With some unfortunate exceptions, these increased expenditures are a sign of health, and do not indicate any tendency on the part of government to absorb an undue proportion of the industrial life of the nation.

This can hardly be said, however, of the great increase in expenditure for pensions and for military and naval equipment. Whether these expenditures have been wisely or unwisely made, it is at least regrettable that 70 per cent of the regular Federal expenditures are due to past wars and to the preparation for war. The burden of this expenditure alone amounted in 1903 to \$339,663,200, or \$4.20 per capita.

Classification of Public Expenditures. — So numerous are the objects of governmental expenditure that it is manifestly impossible to treat the subject exhaustively within the limits of our space. We must content ourselves here with a consideration of some of the more important classes into which such expenditures naturally fall.

1. *Expenditures for Fulfilling the Protective Functions of the State.* — Of the general class of expenditures incurred

in fulfilling the protective function of the State, the first to be mentioned are those (*a*) *for security from foes without the State*. Under this head falls the cost of the army and navy. Until within a few years, this item in our national budget has been relatively unimportant; but when we look to European countries we find a very different state of things. Italy and Spain feel the burden more than the others, but the statesmen of Russia, France, Germany, and England are seriously concerned over the problem which confronts them in providing for the national defence. The direct cost of national defence includes the pay and equipment of troops, and the cost of ships, and cannon, and ammunition, etc. The indirect cost is represented by the pension list, as well as by the great waste of resources and opportunities for labor in times of war.

(*b*) *Internal Security*. Under expenditures for internal security are included the cost of our police system in all its branches,—including constables, sheriffs, etc.,—and that of our judiciary system, since both of these are occupied almost wholly in securing persons and property from injury.

(*c*) *Expenditures for the Poor and Unfortunate*. Every civilized government recognizes an obligation to extend relief to paupers, to the deaf, the blind, the insane, and the feeble-minded, who, from natural defects, are unable to hold their own in the struggle for existence. The problem of relieving such classes is receiving an increasing share of attention from thoughtful people everywhere.

2. *Expenditures for Fulfilling the Commercial Functions*.—A second general class of expenditures consists of those which are incurred in fulfilling the commercial functions of the State. Among these are expenditures (*a*) *for the*

construction and maintenance of such agencies as roads, bridges, canals, and riverways, improved harbors, lighthouses, etc. (b) *The post-office and telegraph and railway lines* are also commercial as well as educational in their purpose, but they are generally managed as self-sustaining or remunerative investments, even when they are under the ownership and management of the State. A similar expenditure for commerce is that (c) for *maintaining a currency and systems of weights and measures*. (d) Expenditure for the *consular service* also falls under the same general head. To a less degree the same may be said of the diplomatic service, though in this case the purpose of the service is perhaps primarily for maintaining international peace.

3. *Expenditures for Fulfilling the Developmental Function.*—The third general class of expenditures consists of those incurred in fulfilling the developmental function of the State. Most important among these is (a) the expenditure for *education*. Of all classes of expenditure that for education has grown most constantly and rapidly in the modern State. Especially has such expenditure increased with the spread of democracy in government. It is felt everywhere that republican institutions find their best safeguard in a high average of enlightenment. Moreover, there is reason for believing that even more directly expenditure for education is justified as a productive investment by the increased earning power and the improved consuming power of the people, to which it powerfully contributes. Under the head of education fall not only the education of the schools, but also that which is to be gained from art galleries and museums and other agencies for the promotion of culture. It is a mistake to regard

these merely as amusements for the idle hour. They should be, and for many they are, indispensable adjuncts to books and to the schools in securing a higher education.

Other expenditures falling in the same general class are those for (*b*) *public recreation*, for (*c*) *investigation*, and (*d*) for *Maintaining equitable conditions for private business*.

4. *Expenditures for the Maintenance of Government*.—The expenditures we have been considering are, of course, expenditures *by government*: we have now to mention a fourth general class,—the expenditures *for government*; that is, expenditures for governmental functions too general and fundamental to be ranged under any of the heads that we have before mentioned. Such are the expenditures for (*a*) *legislation and administration*, and for (*b*) *tax collection*.

Objects of Public Expenditure in the United States.—It is not customary for governments to classify their expenditures as we have here classified them, or in any such way as will show accurately just what the government pays for the objects which we have discussed. But a careful study of Federal, state, and local expenditures will show that the greater part of the Federal expenditure is for the protective and commercial functions, while the greater part of the expense of the developmental functions rests upon the state and local governments. Considering the aggregate expenditures of all the divisions of government, we find that they are roughly divided as follows: for the protective functions, about 45 per cent; for the developmental functions, about 30 per cent; for the commercial functions, about 15 per cent; and for the expenses of government itself, about 10 per cent.

It is also interesting to note the relative growth of

expenditure in the different political divisions of the government. Not only in the United States, but also quite generally throughout the civilized world an increasing proportion of the aggregate expenditure is being made by the local governments, from which it appears that the greatest increase in governmental activity occurs where government is most directly and closely watched and administered by the people themselves. In the United States the expenditures of the state governments have, as a rule, diminished in importance relatively both to Federal and local expenditures, and this fact has generally been held to indicate growing nationalization as well as growing governmental activity.

III. PUBLIC REVENUE

Classification. — Differing classifications of public revenue have been almost as numerous as the writers who have made them. Without entering into a discussion of the reasons for such differences, we may present at once a classification which is in general harmony with the usual treatment of the subject.

A. Permanent Revenues.

I. Regular revenues.

1. Derived directly from government ownership.
 - a. Revenues from public domains.
 - b. Revenues from public industries.
 - a'. Industries publicly owned and managed.
 - b'. Industries publicly owned, but managed by lessees under a charter.
2. Derived from the incomes of private persons and corporations.
 - a. Fees.
 - b. Special assessments.
 - c. Taxes.

II. Irregular and miscellaneous. Fines, forfeits, escheats, gifts, etc.

B. Temporary Revenues. (To be repaid.)

- I. Public loans by the sale of bonds.
- II. Public loans by the issue of treasury notes.

Miscellaneous Revenues. — The class of miscellaneous revenues includes gifts, fines, forfeits, escheats, "conscience money," etc. *Escheat* is a legal term used to describe a property that falls to the State in default of other heirs. Conscience money is money sent without name by persons who have defrauded the government.

Gifts amount to more than is commonly supposed, although they form a relatively unimportant source of revenue. Formerly gifts were not infrequently made for the general expenditures of government. Less than a quarter of a century ago, a citizen of New Jersey left the United States nearly a million dollars to be applied to the payment of the national debt. But gifts are now more commonly made for special purposes, as when Mr. Smithson left the United States half a million dollars to be used in the foundation of the Smithsonian Institution for the Advancement of Science.

Public Domains. — Public domains are a source of considerable revenue in Germany and some other countries. It has generally been thought best that governments should not keep any agricultural land, and to-day not a great deal of arable land is retained by governments, though there is not now so strong a tendency to part with it as there was a generation ago. The public ownership of forests, on the other hand, is everywhere increasing.

Public Industries. — Industries, except those of a monopolistic nature, have not, as a rule, succeeded well as government undertakings. *Model* industrial establish-

ments may, however, be managed by government with beneficial results. Some very important industries, such as the manufacture of fine china, have had their origin in government establishments. Natural monopolies may be made to yield a large part of ordinary revenue, especially in large cities, but manufacturing industries that are naturally competitive should be left in private hands.

Public Loans.—Public loans are a source of revenue that gives rise to public debts. Great national debts are comparatively new in the world's history. Indeed, their origin is as recent as the reign of William and Mary in England. How important they have become in recent times may be judged from the following passage in Professor H. C. Adams's work on *Public Debts*: "The civilized governments of the present day are resting under a burden of indebtedness computed at \$27,000,000,000. This sum, which does not include local obligations of any sort, constitutes a mortgage of \$722 upon every square mile of territory over which the burdened governments extend their jurisdiction, and shows a per capita indebtedness of \$28 upon their subjects. . . . At the liberal estimate of \$1.50 per day, the payment of accruing interest at 5 per cent would demand the continuous labor of three millions of men." On the whole public debts have increased largely in the fifteen years that have elapsed since the publication of Professor Adams's book.

Fees and Special Assessments.—Fees and special assessments closely resemble taxes, but they are of much less significance in the fiscal system. A fee is a "*payment made to the State on the occasion of some specific service rendered by the State to the citizen—the service, however, being non-commercial in character.*" The payment demanded for

recording a deed or mortgage is a fee; so, also, is any court charge, or a charge for a teacher's certificate, a marriage license, etc. A special assessment, which is even more like a regular tax, has been defined as "*a compulsory contribution, levied in proportion to the special benefits derived, to defray the cost of a specific improvement to property, undertaken in the public interest.*" Thus American cities often provide for the paving of particular streets by laying part of the cost upon the entire municipality in the form of a tax, and placing the remainder of the burden, in the form of a special assessment, upon the owners of "abutting" properties in proportion to the value of such properties. In this way the entire city pays for the benefit conferred upon the city, while the people living on the street or owning business property there pay for the special benefit which the improvement has conferred upon them. The custom of municipal improvement by special assessment has been developed much farther in the United States than in Europe.

Taxes. — The most important and most regular source of public revenues is taxation. *Taxes are one-sided transfers of valuable things, exacted by public authority, chiefly from citizens, but also from other persons within its reach, according to some general rule, in order to meet public expenses and to accomplish other public ends.* Taxes differ from fees and special assessments, therefore, chiefly in that there is no attempt to proportion the tax to the benefit conferred upon the individual. The justification of taxation lies simply in the necessity of maintaining the State. If the people are to have a State they must pay for it, and no better means than taxation has yet been discovered.

What is a Just Tax?—No question regarding taxation has been more earnestly discussed than the question of what constitutes justice in taxation. One answer that is commonly heard is that taxes should be proportioned (1) to *benefits derived*. But it is utterly impracticable to attempt to say what proportion of the general benefits of government accrue to particular individuals. And even if this were practicable, it would probably be found in many cases that the greatest benefits are enjoyed by the weak and the poor, who are least able to bear the tax burden.

The Faculty Theory.—A theory more generally accepted by economists to-day is that taxation (2) should be proportioned to "*faculty*," or *ability to pay*. But even accepting this rule, there remains the difficult question, How is faculty to be measured? One answer has been that we may measure ability by (a) *consumption*; but it is evident that the consumption of the poor is out of all proportion to their ability to bear the burdens of the State. Another suggested basis of measurement (b) is *property*; but property differs widely in its productiveness, and, moreover, many persons with little property have large incomes and therefore great ability to bear taxation.

Perhaps the least objectionable measure of ability is afforded (c) by *revenue* or *income*, though even here we must note that incomes differ in permanence and security, and that equal incomes are called upon to support very unequal numbers of persons. It is not possible, probably, to reach a single perfectly just basis of apportionment of the tax burden; but the levying of taxes on income or revenue, with variations to correct manifest cases of inequity, probably approaches as near to ideal taxation as is possible to-day.

Granting this, another question at once presents itself for solution. Shall taxes be *laid in direct proportion to revenue*, or shall the rate be *increased as the amount of revenue increases?* The first method is called (*a*) *proportional taxation*; the second, (*b*) *progressive or graduated*. Sometimes taxes are neither proportional nor progressive, but (*c*) *regressive*; that is, *the rate diminishes as the taxed property or revenue becomes larger*. Such taxes every one admits to be unjust, though many such taxes are levied; but there is no general agreement regarding the relative justice of proportional and progressive taxation. We cannot enter into a detailed discussion of the question, but must leave the further study of the subject to the student. While the progressive tax seems preferable as an ideal, certain practical difficulties make it very doubtful whether we can hope for realization of the ideal in income taxation for a long time to come.

Land Nationalization and Land Municipalization. — A very large number of intelligent citizens of England, Australia, and the United States are adherents and devoted advocates of a scheme for entirely abolishing taxation, as that word is ordinarily understood. Mr. Henry George, author of *Progress and Poverty*, a man of wonderfully earnest human sympathies, and of very strong and sincere convictions, gave the latter part of his life to the advocacy of the plan, which he himself did most to formulate and popularize in modern times. We can do no better, therefore, than to explain the proposed system in Mr. George's own words, as printed in his paper, the *Standard*:—

The *Standard* advocates the abolition of all taxes upon industry and the products of industry, and the taking, by

taxation upon land values, irrespective of improvements, of the annual rental value of all those various forms of natural opportunities embraced under the general term, Land.

We hold that to tax labor or its products is to discourage industry. We hold that to tax land values to their full amount will render it impossible for any man to exact from others a price for the privilege of using those bounties of nature in which all living men have an equal right of use; that it will compel every individual controlling natural opportunities to utilize them by employment of labor or abandon them to others; that it will thus provide opportunities of work for all men, and secure to each the full reward of his labor; and that as a result involuntary poverty will be abolished, and the greed, intemperance, and vice that spring from poverty and the dread of poverty will be swept away.

The proposition is here definitely made that the State shall take all of the pure or economic rent of land, and the claim is made in explanation and justification of the policy that it will abolish poverty. Such a policy might, indeed, prevent landowners who do not care to use their land from keeping it out of the hands of those who would use it; but how it would effect all the other predicted blessings is difficult for most people to comprehend. In the first place, it is difficult to imagine how pure economic rent of agricultural land can be separated in practice from the annual value of the separable improvements on the land. But apart from this difficulty, the appropriation of economic rent by the public without compensation to the owners will probably never appeal to the conscience of the American public as a just thing to do. No abstract reasoning, based on "natural rights," will persuade a modern nation to so radical a step. This honestly and earnestly advocated policy is only one more illustration of

the danger of basing social reasoning on any theory of "natural rights."

Some advocates of the "single tax" recognize the un-wisdom or injustice of appropriating all rents now existing, and therefore propose to compensate present holders of the land. The State in that case would gain only the future increments in value which increasing population may be expected to produce.

In cities it is easy to separate the pure economic rent from the earnings of improvements, such as buildings. In fact, as has been stated elsewhere in these pages, such a separation is frequently made. Moreover, it is in cities that the principal evils attendant on private land-holding are discoverable. Therefore the objections to land *nationalization* do not in the same degree apply to land *municipalization*. Many who will reject the one will favor the other. Even here, however, it is well to proceed very cautiously. Confiscation, at any rate, should not be tolerated. If great and expensive changes along this line should approve themselves to the people, the burden of the changes should be widely diffused throughout the community by means of inheritance and other taxes.

Direct and Indirect Taxes.—In concluding our discussion there remains to be noted a distinction, frequently seen in economic writings, between *direct* and *indirect* taxation. The meaning attributed to these terms at different times and by different writers has varied widely, but a common definition is that *direct taxes are taxes laid by the State upon those who are expected to bear the burden of them*, while *indirect taxes are expected to be shifted to other persons*. Poll taxes, property taxes, and inheritance

taxes are usually called direct, while customs taxes and excise taxes are called indirect. The importer of goods subject to duty pays the tax, but recoups himself from the enhanced price which he is able to charge the consumer of the goods. Close analysis of the problem has led many writers to doubt whether the distinction is, after all, a real one, since in many cases taxes which at first sight seem to be direct, prove to be regularly shifted to others. We cannot enter into a discussion of this subject in a work like the present; but inasmuch as the terms are frequently employed, and as the distinction has played an important part in American financial history on account of the use of the terms in the Federal constitution, it is well to know how the words are commonly used.

As taxation is the most important single subject in the domain of public finance, we shall present a more detailed treatment in the following chapter, in connection with the topic Revenues in the United States.

SUMMARY

1. Public finance treats of the revenues and expenditures of government.
2. Government business is everywhere the largest single business, and profoundly influences all private business.
3. The importance of government business, and hence of public finance, depends upon the dominant idea of the proper economic function of government.
4. Public expenditure in civilized States has been rapidly increasing, owing both to the rapid increase in population and to the widened scope of government activity.
5. Public expenditures are for fulfilling the protective, the commercial, the developmental, and the self-sustaining functions of government.

6. Public revenues are derived from public domains and industries, from fees, special assessments, and taxes, from fines, gifts, etc., and from public loans.
7. Taxes, the chief source of revenue, are compulsory payments for government expenses.
8. A just tax is one which conforms to the ability of the taxpayer to bear the burden.
9. Land nationalization, a proposed plan of taking all the economic rent of agricultural land for the support of the State, is impracticable, and, unless compensation is provided for, it is morally indefensible; land municipalization, the proposal to take the economic rent of city property, stands on a somewhat different footing.
10. The distinction between direct and indirect taxes is neither valid nor valuable.

QUESTIONS

1. What is public finance? From what is it to be distinguished?
2. What is the problem presented by the method of storing revenue in the United States?
3. What is the bearing of public finance upon the labor problem?
4. What view of the economic functions of government is held by the anarchist? By the extreme individualist? The socialist?
5. Why have public expenditures so uniformly increased during the last century?
6. Classify public expenditures, and name particular expenditures falling under each group.
7. What classes of expenditure have shown the most rapid increase in the last century?
8. What are fees? Special assessments? Taxes? What are the differences among them?
9. How do revenues from loans differ from other revenues?
10. What is the justification of taxation? What are the theories regarding just taxation?
11. What is land nationalization? Land municipalization? What is the difference between them? Discuss the justice and practicability of these proposals.

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CHAPTER II

REVENUES IN THE UNITED STATES

I. FEDERAL REVENUES

THE following table shows the Federal revenue classified by sources for the fiscal year ending June 30, 1903 : —

Customs	\$284,479,582
Internal revenue	230,810,124
Postal service	134,224,443
Miscellaneous:	
Profits on coinage, bullion de-	
posits, and assays	\$8,254,740
Fees, consular, letters-patent,	
and land	4,048,833
Sales of public land	8,926,311
Tax on national banks	1,647,429
Sale of Indian lands, etc.	2,393,269
Part payment Central Pacific	
Railroad indebtedness	4,066,350
Other miscellaneous	<u>15,770,036</u>
	<u>45,106,968</u>
Total revenues	<u>\$694,621,117</u>

Customs Taxes.—As appears in the table, the government derives a very large proportion of its whole revenue from customs duties, which are taxes laid upon imported commodities. In earlier days, and particularly before the Civil War, the customs duties constituted nearly the whole of the Federal revenues ; and even now, in times of peace,

about one-half of the ordinary tax receipts of the national government are from this source.

Customs duties are either *specific* or *ad valorem*. *Specific duties are duties laid in proportion to weight or number, without regard to value, while ad valorem duties are levied in proportion to the value of the commodities imported.* Ad valorem duties are open to the objection that they offer a greater temptation to fraudulent valuations, and hence make more difficult the work of the customs officers. Specific duties, on the other hand, while they can be more easily administered, are open to the serious objection that they impose a relatively heavier burden upon less valuable goods of any class. Owing to their greater ease of collection, however, such specific duties now play a larger part than ever before in our tariff system.

Although long use and practical convenience have given the customs duties a large and apparently secure place in our financial system, there are certain evident objections to such taxation which must be borne in mind by the student in considering the general question of tax reform. These objections call for a word of explanation.

Objections to Customs Duties.—1. Their Regressive Character.—First of all, it is an objection against such taxes that they are regressive in character. Customs duties, to yield a large revenue, must be levied upon goods of very general consumption, and moreover fiscal reasons lead to the imposition of high rates upon such commodities. But it is for precisely such commodities that people of only moderate incomes spend a greater proportion of their income than do the rich. Therefore the tax is regressive; it lays a disproportionate burden upon poor people and people of moderate means.

2. *Effect upon Industry.* — In the second place, such taxes, if they are "protective" in character, interfere with the natural disposition of the nation's labor and capital. Moreover, it regularly happens that such a tariff takes much more from consumers than ever finds its way into the Federal treasury, since only imported goods yield a revenue, while all goods, imported and domestic, are sold at a higher price to the consumer.

3. *Inelasticity.* — The two objections just explained are based chiefly upon social and industrial considerations. A third objection is directly financial in its nature. One mark of a good tax is its elasticity. Now few taxes are more inelastic than customs duties. Frequent changes of tariff rates are fatal to that stability of industrial conditions without which business cannot prosper. Unusual demands upon the Federal purse cannot be met by changes in the tariff schedules.

4. *Uncertainty.* — And hence results still a fourth objection, also financial in character. It is a serious defect of such taxes that they are likely to yield least when government need is greatest. A war, calling for unusual expenditures, is certain to curtail international trade and hence revenues from customs duties. Moreover, recurrent industrial depressions affect most seriously the government's receipts from this source.

As we have already said, in spite of the serious defects of customs duties as a main source of revenue, long-established usage and the great fiscal needs of modern government are certain to maintain a prominent place for this form of taxation for a long time to come. Meantime, nations usually seek to compensate for these objections by supplementing their customs duties with other forms of taxation.

Excise Taxes. — One such form of taxation, as practised in the United States, is that of excise taxes, the revenue constituting part of the "internal revenue" of the government. *Excise duties or taxes are those levied directly upon certain classes of goods produced within the country.* Down to the Civil War, these taxes were bitterly opposed in the United States, and very little revenue was derived from them. The enormous cost of the Civil War required a resort to this form of taxation, and when the strain of war had passed, much of the popular opposition to excise taxes was found to have disappeared, with the result that the Federal government now secures from this source revenues second in amount only to those from customs duties.

Method of Collection. — The method of collecting excise taxes has been developed into a simple and effective system. Producers of tobacco, cigars, whiskey, etc., must purchase revenue stamps from the government and put these upon the packages containing the goods in such a way that opening the packages will destroy the stamps.

Excise taxes are regularly classed with customs duties as indirect taxes, because, while they are laid directly upon producers, it is supposed that they will be shifted to consumers in the enhanced price of the commodity. In some other respects, too, excise taxes are open to the same objections that lie against customs duties. They are regressive in character, though as they are laid chiefly upon liquors and tobacco, the injustice of their regressive character is less grave. But, on the other hand, excise taxes have proved very productive, and they offer relatively little difficulty in collection. Moreover, they form a more

reliable source of revenue than do customs duties, in that they fluctuate less in times of war and in periods of industrial depression. Hence these taxes are also likely to form a considerable part of the national revenues for a long time to come.

Taxes on Transactions. — In times of urgent need, as in the War of 1812, the Civil War, and the late war with Spain, the Federal government has imposed taxes upon various sorts of transactions. Thus the War Revenue act of 1898 imposed "stamp" taxes on bank checks, telegrams, freight and express receipts, transfers of stocks and bonds, bills of exchange, etc., the method of collecting the revenue being similar to that described in the case of excise taxes.

Though such taxes may be made the source of large and easily collected revenue, they are not likely to be resorted to except in times of emergency, since their general effect is to impede business; and a check on business activity soon lessens the revenue from other sources. In most cases, as was shown by our recent experience, taxes on transactions are borne by the consumer or purchaser, though in some cases, if the tax be a small one, the producer or seller will "pocket the loss."

II. STATE REVENUES

Income taxes and inheritance taxes have been levied by the Federal government, but as these taxes have also been resorted to by the states, we may defer our discussion of them to a later page. We come next to taxation by the commonwealths, and in beginning it may be well to study the following table showing the revenues of New York State for the fiscal year ending September 30, 1902: —

Direct State Taxes (including the general property tax)	\$6,973,663.82
Taxes on corporations and their organization	7,606,750.29
Tax on transfers (inheritances, direct and collateral) .	3,303,554.72
Liquor tax (State's share)	4,221,671.99
Miscellaneous,—fees, sales, etc.	1,555,134.61
Total	\$23,660,775.43

Poll-taxes. — One antiquated source of revenue which does not appear separately in the table is the poll-tax. Many states levy poll or capitation taxes, to be paid into the state or local treasury. *Poll-taxes are taxes usually levied at a uniform rate upon practically all male citizens.* They are difficult of collection, in the highest degree inequitable, and are gradually disappearing from the financial systems of advanced governments.

General Property Tax. — The greater part of the revenue entered in the table under the name Direct State Taxes is from a general property tax, *a tax which is levied — in theory — upon nearly all property, real and personal, in the hands of the people.* The importance of this tax appears in the fact that revenue derived from it in the commonwealths of the United States constitutes nearly three-fourths of the state and local revenues, and nearly one-half of the total revenues of the country,—national, state, and local.

And yet no economist who has ever written upon the subject, and no state officer who has had to do with the administration of the tax, has ever been able to speak of it except in terms of the severest condemnation. Naturally, then, there is now a strong tendency to work away from this form of taxation. Some of the many serious faults which the general property tax has everywhere shown call for comment and explanation.

Though the method of assessment and apportionment differs in many details among the states, it is the usual custom for assessors in each community to prepare complete statements of all kinds of taxable property owned by the people of the community. In some states the assessors receive from all residents sworn "lists" of property owned and subject to tax. By the terms of the law, the property is supposed to be rated at its true, full value, though by the acknowledged practice of assessors and courts of review, the real rates vary widely from state to state, and even from community to community. On the basis of the property valuations thus made the state and local governments—county and town—levy direct taxes at a rate fixed from year to year according to the fiscal needs. The tax is then collected by local officers, and of the whole amount the portion levied by the county and state is passed on to the designated officers after each minor political division has set aside its share.

1. *Unjust Apportionment.* — The first of the defects of the tax appears in the apportionment of the state's share of the tax. Each community has a narrow, selfish interest in reducing its valuation that it may escape its just share of the tax. In this sordid struggle of community against community, assessments are made to vary all the way from 10 to 90 per cent of the true values. The same mean struggle is especially frequent between city and country districts. To correct the evil, state boards of equalization are usually appointed, but experience has shown that such boards are unable to do much to lessen the inequities inherent in the system.

2. *Inequity as between Realty and Personality.* — In the second place, the general property tax has proved grossly

inequitable in laying an undue proportion of its burden upon real property, allowing various forms of personal property to escape with a slight tax or with no tax at all. A secondary result of this inequity is that the rural districts bear a disproportionate burden, since the greater part of the tax-escaping personality is owned by the wealthy citizens of our cities.

3. *Inequalities of City Assessments.* — Very similar to the preceding evils is the further injustice wrought by the tax through the disproportionate assessment of the pieces of real estate in cities. During recent years several state tax commissions have found and reported that in the case of city properties the proportion between the assessed value and the real value quite regularly varies inversely as the value of the property. Thus in one case it was found that some of the most valuable properties were assessed at only about one-tenth of the real value, while properties of little value were regularly assessed at from five to six-tenths of their value.

4. *Temptation to Dishonesty.* — It follows from the evils already described that the general property tax leads to a shocking amount of dishonesty, perjury, bribery, and other forms of corruption. Indeed, as one writer has expressed it, "The general property tax has gone far toward making perjury respectable and even virtuous."

Inasmuch as the general property tax has been condemned by nearly all students of finance and by financial administrators, we should all welcome the present tendency on the part of the states to turn to other forms of taxation. In several commonwealths the state governments have entirely or nearly abandoned the general property tax, leaving it chiefly to the smaller political divisions;

and other commonwealths are moving in the same direction.

Corporation Taxes. — Partly owing to the proved injustice of the general property tax, but partly also owing to the recent great growth of the corporate form of business enterprise, there has been in the last quarter of a century a considerable development along the line of taxation of corporations. In some cases, as in New York, there are two taxes thus laid, one upon the organization of such corporations, and another upon their annual business. In some cases, taxes are laid only upon special forms of corporate business, such as banking and railway companies and the like, while in other cases the tax is broadened to include all corporate business. It has been found much easier to reach the revenues of such businesses directly than to reach them through the taxation of the stocks and bonds of the corporations in the hands of individual owners. New York, Pennsylvania, Vermont, and Massachusetts are among the states that have come nearest to abandoning the general property tax, and developing in its stead taxation of corporations.

License Taxes. — Another form of state taxation that has undergone a considerable development in recent years is that of business licenses. License taxes, which have at rare intervals been levied by the Federal government, are now exclusively used by state and local governments. When, as is the case in our Southern states, licenses are required for many different kinds of business, serious disturbance to business results. But much may be said in favor of a system of taxing by license a few industries which it is generally believed the state should regulate. The most important of such license taxes are those laid

on the sale of liquor. The state of New York, which divides the proceeds from liquor licenses between the state and the community, received \$4,221,671.99 as its share of such revenue in the fiscal year 1902.

Inheritance Taxation. — Still another form of taxation to which increasing resort has been had in recent years is that of inheritances, collateral or direct. In the levying of inheritance taxes, or "succession duties," there are many and wide differences of detail which we cannot stop to consider. In many cases such taxes are progressive or graduated on a twofold basis. Thus, a small bequest to a wife or son or daughter would be taxed at the lowest rate, while the bequest of a large fortune to distant relatives or strangers in blood would bear the heaviest burden. This form of taxation is winning increasing favor from economists and from statesmen, both on account of its conformity to the "faculty" theory of taxation, and because of its practical ease and certainty of collection. The large part which the tax already plays in the finances of New York State is shown in the table. Fifteen commonwealths, including New York, Ohio, Illinois, Massachusetts, and Wisconsin, raise a part of their revenue from this source.

The Income Tax. — Income taxation calls for more extended comment. First of all we must point out the peculiar situation in which the matter of such taxation now stands in our country. More than a century of experience in many states has demonstrated that under our form of government, income taxation cannot be successfully practised by the state governments. If New York State should levy an income tax, its wealthy citizens could easily escape it by acquiring a legal residence in

some near-by state which would be likely to bid for such action. It follows that the only practicable plan of reaching incomes is through taxation by the Federal government.

Federal Income Taxation. — The Federal Constitution requires that representatives in Congress and direct taxes shall be apportioned among the states "according to their respective numbers." Under early decisions of the United States Supreme Court, it had been held that direct taxes, within the meaning of the Constitution, did not include income taxes. But in passing upon the income tax provision of the Revenue Act of 1894, the Supreme Court, by a majority of one and after a change in the *personnel* of the court during the consideration of the case, reversed the earlier finding and held that income taxation must be levied, if at all, upon the states in proportion to their population. Under this ruling it becomes practically impossible to find a place for the taxation of incomes anywhere in our financial system; for the injustice of laying a Federal income tax upon the basis of population becomes apparent at once when we recall the great per capita wealth of New York and Pennsylvania as compared with that in Nevada and some of our Southern states.

The Income Tax in Practice. — But, it may be asked, Is it not well that income taxation has thus been made impossible, at least until a possible re-reversal of the opinion of our highest court? To answer this question, we must consider the claims for and against the tax. First of all, it is to be noted that in England, Italy, Prussia, and other German States in which the income tax has been given a trial, (1) *experience has justified this form of taxation,*

according to the majority opinion of those who have considered the matter. Moreover, it is especially noteworthy that income taxation (2) *gains in economy and productivity, and wins increasing approbation as the years go by.* This is in sharp contrast with the experience of all States in their use of the general property tax, which has grown more unjust and less workable, the longer it has been tried.

The Income Tax in Theory. — In the third place, (3) there is little question that an income tax, assuming it to be fairly enforceable, *conforms almost perfectly to the ideal* of taxation, *that men should pay the expenses of the State in proportion to their "faculty" or ability*, since income is by all means the best single mark of such ability. Where the tax is applied uniformly upon all kinds of income, (4) *it cannot be shifted easily* if at all, and in any event, the tax on rent and monopoly privileges of all sorts cannot be shifted. This itself is a strong recommendation of the tax.

Exemption. — It is usual to exempt small incomes from income taxation, for the reason that possessors of such incomes already pay a disproportionate share of other taxes, and for the further very practical reason that the expense of collecting the tax on such incomes bears too high a proportion to the return to render such taxation economical.

Practicability. — The question of the possibility of a fair enforcement of income taxation is best answered by the English experience. We cannot here explain the English system in detail, but may simply state that the laws there provide for the taxation of all incomes grouped into five classes, and that the tax is laid in the greater

number of cases "at the source." For example, dividends of a corporation pay the tax before they are distributed to the individual shareholders.

Conclusion. — The objections commonly urged against income taxation, that it is inquisitorial, impracticable, etc., must be left to the study and discussion of the class. Whatever may be the weight of such objections, it remains a fact that the underlying justice of the tax, coupled with its proved practicability in other countries, is leading an increasing body of Americans to favor this method of securing revenues for the Federal government, and making large fortunes pay their just share of the expenses of government.

III. LOCAL REVENUES

Local areas of administration in the United States have usually relied in the main upon the same taxes which are levied by the state governments. Thus, as has been explained above, the general property tax is levied at a rate which represents the contribution of the taxed property to town, county, and state governments. Similarly, the local governments are usually allowed a share of the revenue from liquor-license taxation. Municipalities also at times have their independent license system for hucksters, etc., though this system usually has for its main purpose the regulation of such business.

Revenue from Franchises. — One form of revenue which American cities have been too prone to neglect is now receiving increasing attention. Private municipal service corporations enjoy very valuable privileges under their municipal franchises, and they should be made to pay for these franchises all that they are worth; that is, the capi-

talization of their earning power, less the actual capital invested and an extra allowance for the regular risks of the business. Some cities have been able to manage such municipal enterprises for themselves with great profit, and it is not improbable that this method will be adopted more generally as American municipalities become more honest and businesslike.

For the sake of completeness, the following table of New York City's revenues for the year 1902 is presented, that the student may compare it with earlier tables showing the revenues of a state and the nation. The figures as given in the annual report of the City Comptroller have been rearranged to bring them within the classification of sources of revenue given on pages 335-336.

Revenues from Public Property:	\$3,940,633.05
Rents:	\$3,528,529.75
Docks and slips . . .	\$2,676,040.45
Ferry	295,885.47
Market stands . . .	280,596.79
City buildings . . .	137,630.70
Others	<u>138,376.34</u>
Sales:	260,036.06
Articles made in public institutions . .	77,311.27
Virus	33,512.89
Others	<u>159,211.90</u>
Privileges (including "trimming scows," \$92,273.92)	97,426.31
Interest, dividends, and sales	<u>44,640.93</u>
Public Industries, publicly managed:	8,890,476.77
Water	8,889,581.22
Sewer	<u>895.50</u>

Franchises:	\$383,942.15
Including those of	
Railroads	\$340,013.87
Gas lighting	20,058.98
Pipe lines	8,635.63
Coach Company	5,373.25
Electric lighting	<u>4,480.54</u>
Fees:	1,110,626.73
Fees	462,068.48
Fees and fines	274,437.84
Tolls	<u>374,120.41</u>
Special Assessments	4,993,831.87
Taxes:	89,810,048.63
Real Estate	73,436,178.24
Personalty	6,953,787.41
Licenses other than liquor	382,240.25
Including those for	
Street cars	\$ 76,690.00
Pawn-brokers	97,500.00
Sidewalk stands	60,150.00
Special Taxes:	7,337,929.03
Banks	2,019,650.05
Excise (City's share)	<u>5,318,278.98</u>
Old taxes, with interest	1,699,913.70
Irregular and miscellaneous:	567,914.76
Permits	550,910.31
Fines, penalties, and costs	8,479.60
Forfeits	7,482.58
Bequests	851.77
Conscience fund	<u>190.50</u>
Public loans, — receipts from sale of bonds	110,603,951.54
Received from state, — for schools	1,872,395.66
Unclassified	<u>1,073,201.07</u>
Total	\$222,746,982.23

IV. A BALANCED REVENUE SYSTEM

In what has gone before, we have not dwelt upon the question whether any forms of revenue are particularly appropriate to different divisions of our government, or whether there is any gain in a balanced system for the different governments considered together. A moment's reflection should convince the student that no part of our revenue laws can be finally judged until it is considered in its relation to the whole system. To emphasize this fact, it may be well to suggest here a balanced revenue system, in which Federal, state, and local revenues will be placed in the right relation one to another.

Federal Revenues.—In the first place, it is to be noted that the Federal Constitution itself prescribes the place of customs duties in the system. Again, excise taxation could not be practised by the state governments, since any state that should begin such a practice would promptly drive the taxed production into the jurisdiction of other commonwealths. To these two natural sources of Federal revenue may be added the taxes on transactions, though these should be rarely and sparingly levied; taxation of interstate commerce, which would be a peculiarly appropriate source of Federal revenue, and would offer an excellent opportunity for the regulation of interstate business; and income taxation, which is now unconstitutional, but which may again become constitutional, as it has been before. At present no one of these last three forms of taxation is demanded by urgent fiscal need; but it may be expected that when such need arises, the government will resort to one or all of these sources rather than increase much further the present customs and excise taxes.

Moreover, it may even be hoped that there will in any event be a gradual lessening of the proportionate dependence upon customs duties and excises, and an increasing resort to interstate commerce and income taxation, which are more equitable, more economical, more certain, and more elastic sources of revenue.

State Taxation. — We have already pointed out the manifold inequities of the general property tax. There is no longer any question that it would be well for our commonwealths to abandon as rapidly as possible this source of revenue, and to leave to the local governments the taxation of real property. The state can easily develop corporation, inheritance, and license taxation until they will prove sufficient for state needs. Already two commonwealths have made the change, and many others seem prepared to follow them. Under these forms of taxation, personal property will be taxed more certainly and more equitably than it has anywhere been taxed under the general property tax.

Local Taxation. — The system thus far outlined would leave to the local governments the most convenient and most appropriate sources for their revenues. First of all, public franchises or municipal management of public-service monopolies should be made in the United States as in Europe to pay a considerable part of the local expenses of government. Licenses also form a proper source of revenue even for smaller communities. Finally, any remaining revenues could easily be supplied from a little-burdensome tax on real estate, with perhaps a special and distinct tax upon such personal property as household furniture, live stock, farm implements, merchants' stocks, etc.

Such a harmonious system as has been here suggested would insure a greater degree of equity, elasticity, economy, certainty, and harmony than now obtain in our unsystematic hit-and-miss forms of taxation.

SUMMARY

1. The revenues of the Federal government are derived in great part from customs duties and excise taxes; other sources are taxes on transactions, postal receipts, etc.
2. Customs duties are regressive, inelastic, and uncertain, and disturb business; but their productiveness gives them a strong place in the financial system.
3. Excise taxes on liquor and tobacco are also regressive, but they are less objectionable in other respects, and they are conveniently collected.
4. States have relied in the past mainly on the general property tax, which is unwieldy, unscientific, and inequitable, and leads to many sorts of corruption.
5. Poll-taxes no longer play any considerable rôle in taxation.
6. Taxes on corporations, license taxes, and inheritance taxes are in many states taking the place of other forms of taxation.
7. The income tax, which has been proved to be practicable, and which is theoretically a very just form of taxation, cannot at present be successfully laid in the United States.
8. Local governments now rely mainly on the general property tax and license taxation.
9. A balanced revenue system would have the Federal government supported chiefly by taxation of incomes and interstate commerce and by customs and excise taxes; the state governments, by corporation and inheritance and license taxes; the local government, by franchise and license taxation, supplemented if necessary by small separate taxes on real property and some classes of tangible personal property.

QUESTIONS

1. What part of the Federal revenues comes from customs duties? From excise taxes?

2. What are specific duties? *Ad valorem* duties?
3. State and explain the objections to customs duties; to excise taxes. Compare the two.
4. Describe the method of collecting excise taxes.
5. What is the objection against taxing transactions?
6. Describe the evils of the general property tax. How is the general property tax levied?
7. What has caused the recent great development of corporation taxation?
8. What are the advantages of inheritance taxation?
9. Discuss the advantages of income taxation; the disadvantages.
10. Frame a balanced system of taxation for town, state, and nation, and explain why each tax is placed where it is.

LITERATURE

- Adams, H. C.: *The Science of Finance*, Part II, Bk. II, Ch. VI, especially § 73.
- Daniels, W. M.: *The Elements of Public Finance*, pp. 167-170 and pp. 186-191.
- Plehn, C. C.: *Introduction to Public Finance*, Part II, Ch. VIII, § 1.
See also other references at close of preceding chapter.

APPENDIX I

SUBJECTS FOR ESSAYS, DISCUSSIONS, AND DEBATES

THE following list is intended simply to be suggestive. Students are advised first of all to choose such subjects for study as are best suited to the local environment. Thus, if the student lives in a rural district, let him first study local land values, agricultural rent, farming methods and their changes, mortgage indebtedness, the size of farms, the business character of farmers, the use of machinery, transportation of produce, farmers' organizations, etc., all with reference to his own neighborhood. If he lives in a manufacturing town, let him study in the same way the factory problem,—the extent to which women and children are employed, wages and hours of labor, means of preventing or adjusting clashes between employers and employed, etc.; or let him investigate the local railway problem,—freight rates, safety precautions, accidents, etc.

It hardly needs to be said that in selecting subjects for debate from the following list, care should be exercised to choose only such topics as offer a real affirmative and negative, and to frame the question in such a way as to have the two sides well balanced.

BIOGRAPHICAL AND PERSONAL

(Especially for Essays)

- Sketch of the Life of Adam Smith.
- The Life Work of Robert Owen.
- Benjamin Franklin as a Practical Economist.
- Arnold Toynbee.
- Karl Marx and his Theories.
- Henry George and the Single Tax.

LABOR AND LABOR ORGANIZATIONS

- Economic Causes for the Rise and Fall of Slavery in the United States.
- Economic Bearings of Free Land in the United States.
- Indentured Servitude in the American Colonies.
- The Sweating System in our Great Cities.
- The Value and Cost of Child Labor.
- Convict Labor.
- The Economy of High Wages.
- Sunday Labor.
- The History and Prospects of Profit-sharing.
- Voluntary Coöperation in the United States.
- Workingmen's Budgets.
- Old Age Pensions.
- Labor Organizations in the United States.
- Incorporation of Trade-unions.
- Compulsory Incorporation of Trade-unions.
- The American Federation of Labor.
- Compulsory Arbitration in New Zealand.
- Factory Legislation in the United States.
- Strikes.
- The National Consumers' League.
- Trade-union Labels.
- The National Civic Federation.*

Chinese Labor and the American Standard of Life.
The Power of Consumers over Conditions of Employment.
Combinations of Employers and Employees against the Public.
Government by Injunction.

LAND AND FOOD SUPPLY

Agricultural Rents in England during the Nineteenth Century.
Extensive and Intensive Farming in the United States.
The Relation between Small Farms and Democracy.
Forest Culture in New York State.
What Has Been Done with our Public Domain ?
The Possibilities of Irrigation in our Arid States.
How Great Cities are Fed.

MONEY, BANKS, AND BANKING

Money in Various Climes and Times.
The Demonetization of Silver in the United States.
National and International Bimetallism.
Fiat Money in an Ideal State.
The English and American Banking Systems.
Our National Banking System.
Postal Savings Banks.
A Visit to the New York Clearing-house.
Credit in Modern Industry.
Usury and Usury Laws.
The Proposed Branch Banking System in the United States.
The Law of March 14, 1900.
Assets Currency.

COMMERCE, MONOPOLIES, ETC.

The Advance and Decline of American Shipping.
Ship Subsidies.
The Stock Market and its Relation to Industry.
Economic Crises.

Monopolies, Old and New.
Trusts, What They Are and What They Do.
Municipal Lighting.
The Social Economy and Waste of Advertising.

TRANSPORTATION

The Farmer's Interest in Good Roads.
The Prussian Railway System.
Railway Combinations in the United States.
The Interstate Commerce Commission and its Powers.
River and Harbor Bills.
How Railway Rates Should Be Determined.

SOCIAL PROBLEMS

The Influence of Luxury upon Rich and Poor.
How a Day-laborer with a Family of Five Exists in the Student's Community.
Tenement-house Life in Large Cities.
Working-girls' Clubs.
The Economic and Moral Causes of Poverty.
The Charity that Pauperizes.
Immigration and Social Standards.
Child Labor.

TAXATION AND THE TARIFF

Adam Smith on Taxation.
Income Tax Decisions of the United States Supreme Court.
Taxes that Can Be Shifted.
Taxation and Perjury.
The Internal Revenue System.
The English Corn Laws.
The Protective Tariff on Sugar.
The Taxation of Inheritances.
Reciprocity and Reciprocity Treaties.

Does the Protective Tariff Benefit American Labor?
John Stuart Mill on the Taxation of Land Values.

THE STATE IN INDUSTRY

Four Views of the Economic Functions of Government: Anarchism, Extreme Individualism, Moderate Individualism, Socialism.

The Relation of the State to Industry in the United States.

Fiscal Monopolies in France.

The South Carolina Dispensary Law.

The Telegraph in England and America.

National Workshops in France in 1848.

Our Subtreasury System.

Ideal Commonwealths.

Christian Socialism.

The Fabian Socialists.

Socialistic Experiments in the United States.

The Social Democratic Party in Germany.

Are We Tending toward Socialism?

Socialism or Social Reform, Which Shall It Be?

Socialism vs. Imperialism.

The Brotherhood of Labor.

Liberty of the Press in the Socialistic State.

GENERAL THEORY

The Theory of Value in Marshall and Böhm-Bawerk.

The Malthusian Theory of Population.

The Theory of a Wage-fund.

The "Lump of Labor" Theory, or the Theory of a Work-fund.

Money and the Balance of Trade: An Exploded Theory.

A Study of Human Wants.

Possible Substitutes for Competition.

Interesting Cases of Conjunctural Gains.

What are Economic Laws?

The Influence of Climate upon Civilization.

The Quantity Theory of the Value of Money.

MISCELLANEOUS

The Economic Results of the Great Plague of 1348.

The Irish Famine of 1848.

What Bad Cooking Is, and What It Costs.

What Our Community Has to Pay for Intoxicants.

The Economic Functions of the Church.

Changes of Fashion in Women's Clothing.

A Study in Division of Labor. (To be drawn from the student's observation.)

Our National Ash-heap. (The cost to the nation of inflammable construction of building.)

An Expensive Luxury. (A careful statistical study of the cost of tobacco to individuals and nations.)

The Cost of War. (A comparative study of the items in various national budgets that are due to wars past or to preparation for future wars.)

APPENDIX II

COURSES OF READING

IT is believed that both students and teachers may derive valuable aid from the following selected bibliographies. The first group in each case includes works of a relatively untechnical character, and therefore constitutes a sort of elementary, "minimum" course of special study of the particular topic. The books mentioned in the second group are in each case more advanced and technical, and may therefore be used either for advanced courses of study or as works of reference. The authors would suggest that a school desiring to form a standard working library in Economics would do well to purchase the books mentioned in the second groups in the order in which they are named.

GENERAL ECONOMICS

GROUP 1

Blackmar, F. W.: *Economics*.

Bullock, C. J.: *An Introduction to the Study of Economics*.

Devine, E. T.: *Economics*.

Gide, Charles: *Principles of Political Economy*. (American adaptation, 1904.)

Seager, Henry R.: *Introduction to Economics*.

Walker, F. A.: *Elementary Course in Political Economy*; also
Briefer Course in Political Economy.

GROUP 2

- Smith, Adam : *Wealth of Nations* (in Ashley's Economic Classics).
- Marshall, A. : *Principles of Economics.*
- Smart, W. : *Introduction to the Theory of Value.*
- Clark, J. B. : *The Distribution of Wealth.*
- Mill, J. S. : *The Principles of Political Economy.*
- Ricardo, D. : *Principles of Political Economy and Taxation.*
(Six chapters in Ashley's Economic Classics.)
- Walker, F. A. : *Political Economy.* (Advanced Course.)
- Patten, S. N. : *The Premises of Political Economy.*
- Hobson, J. A. : *The Economics of Distribution.*
- Commons, J. R. : *The Distribution of Wealth.*
- Smart, W. : *The Distribution of Income.*

ECONOMIC HISTORY

GROUP 1

- Ashley, W. J. : *Introduction to English Economic History and Theory.* 2 vols.
- Cheyney, E. P. : *Industrial and Social History of England.*
- Beard, C. : *The Industrial Revolution.*
- Ely, R. T. : *Evolution of Industrial Society.*
- Coman, Katharine : *The Industrial History of the United States.*
- Hewins, W. A. S. : *English Trade and Finance.*
- Price, L. L. : *History of English Commerce and Industry.*
- Warner, T. : *Landmarks of English Industrial History.*

GROUP 2

- Bücher, Carl : *Industrial Evolution.* (Translation.)
- Hobson, J. A. : *The Evolution of Modern Capitalism.*
- Toynbee, Arnold : *The Industrial Revolution.*
- Wright, C. D. : *Industrial Evolution of the United States.*
- Wells, D. A. : *Recent Economic Changes.*

- Rand, B.: *Selections illustrating Economic History since 1763.*
Gibbins, H. de B.: *Industry in England.*
Cunningham, W.: *Growth of English Industry and Commerce.*
2 vols.
Rogers, J. E. T.: *Six Centuries of Work and Wages and A History of Agriculture and Prices in England.*
Ingram, J. K.: *History of Slavery.*

THE HISTORY OF POLITICAL ECONOMY

GROUP 1

- Price, L. L.: *A Short History of Political Economy in England.*

GROUP 2

- Ingram, J. K.: *History of Political Economy.*
Ashley, W. J. (editor): Economic Classics, including selected passages from Adam Smith's *Wealth of Nations*; six chapters of Ricardo's *Principles of Political Economy*; selected passages from Malthus's *Theory of Population*; Mun's *England's Treasure by Foreign Trade*; Jones's *Peasant Rents*; and Schmoller's *The Mercantile System.*

RENT, LAND NATIONALIZATION, AND THE SINGLE TAX

GROUP 1

- George, Henry: *Progress and Poverty.*
Walker, F. A.: *Land and its Rent.*

GROUP 2

- Commons, J. R.: *The Distribution of Wealth.*
Clark, J. B.: *The Distribution of Wealth.*
Hobson, J. A.: *The Economics of Distribution.*
Patten, S. N.: *Dynamic Economics.*
Smart, W.: *The Distribution of Income.*

MONEY, CREDIT, AND BANKING

GROUP 1

- Bagehot, W.: *Lombard Street.*
 Bolles, A. S.: *Money, Banking, and Finance.*
 Jevons, W. S.: *Money and the Mechanism of Exchange.*
 Kinley, D.: *Money—A Study of the Theory of the Medium of Exchange.*
 Walker, F. A.: *Money, Trade, and Industry.*
 White, Horace: *Money and Banking.*

GROUP 2

- Report of the Monetary Commission of the Indianapolis Convention.
 Scott, W. A.: *Money and Banking.*
 Laughlin, J. L.: *The Principles of Money, and The History of Bimetallism in the United States.*
 Dunbar, C. F.: *Theory and History of Banking.*
 Nicholson, J. S.: *Money and Monetary Problems.*
 Fisk, A. K.: *The Modern Bank.*
 Cannon, J. G.: *Clearing Houses.*
 Conant, C. A.: *History of Modern Banks of Issue.*
 Sumner, W. G.: *History of American Currency.*
 Muhleman, M. L.: *Monetary Systems of the World.*
 Knox, J. J.: *United States Notes.*
 Walker, F. A.: *International Bimetallism.*
 Willis, H. P.: *History of the Latin Monetary Union.*

PUBLIC FINANCE

GROUP 1

- Daniels, W. M.: *Elements of Public Finance.*
 Plehn, C. C.: *Introduction to Public Finance.*

GROUP 2

- Adams, H. C. : *The Science of Finance.*
 Cohn, G. : *The Science of Finance.* (Translation.)
 Bastable, C. F. : *Public Finance.*
 Seligman, E. R. A. : *Essays in Taxation.*
 Dewey, D. R. : *Financial History of the United States.*
 Noyes, A. D. : *Thirty Years of American Finance.*
 Ely, R. T., and Finley, J. H. : *Taxation in American States and Cities.*
 Taussig, F. W. : *The Tariff History of the United States.*
 Kinley, D. : *The Independent Treasury.*
 West, Max : *The Inheritance Tax.*
 Howe, F. C. : *Taxation and Taxes in the United States under the Internal Revenue System, 1791-1895.*
 Kinsman, D. : *The Income Tax in the Commonwealths of the United States.*

INTERNATIONAL TRADE AND PROTECTIONISM

GROUP 1

- Bastable, C. F. : *Theory of International Trade.*
 Bastiat, F. : *Sophisms of Protection.*
 Clare, G. : *Money Market Primer.*
 Ely, R. T. : *Problems of To-day.*
 Taussig, F. W. : *Tariff History of the United States.*

GROUP 2

- Sumner, W. G. : *Protectionism.*
 —Patten, S. N. : *The Economic Basis of Protection.*
 Wells, D. A. : *Practical Economics.*
 List, F. : *National System of Political Economy.*
 Carey, H. C. : *Harmony of Interests.*
 —Ashley, W. J. : *The Tariff Problem.*

SOCIALISM

GROUP 1

- Bellamy, E.: *Looking Backward.*
- Brooks, J. G.: *The Social Unrest.*
- Ely, R. T.: *Socialism and Social Reform.*
Gronlund, L.: *The Coöperative Commonwealth.*
- Howells, W. D.: *A Traveller from Altruria.*
- Morley, H. (editor): *Ideal Commonwealths.*
- Reeves, W. P.: *State Experiments in Australia and New Zealand.*

GROUP 2

- Kirkup, T.: *History of Socialism.*
- Marx, Karl: *Capital.* (Translation.)
- Rae, J.: *Contemporary Socialism.*
- Schäffle, A. E. F.: *The Quintessence of Socialism.* (Translation.)
- Vandervelde, E.: *Collectivism.* (Translation.)
- Woolsey, T. D.: *Communism and Socialism.*

LABOR: ITS POSITION, ITS CONDITIONS, AND ITS
EARNINGS

GROUP 1

- Ely, R. T.: *The Labor Movement in America.*
- Gladden, W.: *Working People and their Employers.*
- Mitchell, J.: *Organized Labor.*
- Toynbee, Arnold: *The Industrial Revolution in England.*
- Wright, C. D.: *Industrial Evolution of the United States.*

GROUP 2

- Report of the United States Industrial Commission.
 Annual and Special Reports of the United States Labor Bureau.
 Hobson, J. A.: *The Evolution of Modern Capitalism.*
 Schloss, D. F.: *Methods of Industrial Remuneration.*

- Jevons, W. S.: *The State in its Relation to Labor.*
Stimson, F. J.: *Handbook to the Labor Law of the United States.*
Lowell, Josephine S.: *Industrial Arbitration and Conciliation.*
Webb, Sidney and Beatrice (Potter): *History of Trade-unionism and Industrial Democracy.*
Potter, Beatrice: *The Coöperative Movement in Great Britain.*
Levasseur, E.: *The American Workman.* (Translation.)
Gilman, N. P.: *Profit-sharing.*
Ashley, W. J.: *The Adjustment of Wages.*
Rogers, J. E. T.: *Six Centuries of Work and Wages.*
Brassey, T.: *Work and Wages.*

MONOPOLIES AND INDUSTRIAL COMBINATIONS

GROUP 1

- Ely, R. T.: *Monopolies and Trusts.*
Gurton, G.: *Trusts and the Public.*
Jenks, J. W.: *The Trust Problem.*
Lloyd, Henry D.: *Wealth against Commonwealth.*
Von Halle, E.: *Trusts and Industrial Combinations.*
Meade, E. S.: *Trust Finance.*

GROUP 2

- Report of the United States Industrial Commission, Vols. I and II.
Adams, H. C.: *The Relation of the State to Industrial Action.*
Bemis, E. W.: *Municipal Monopolies.*
Clark, J. B.: *Theory of Economic Progress.*
Farrer, T. H.: *The State in its Relation to Trade.*
Cook, W. W.: *The Corporation Problem.*
Bridge, J. H. (editor): *The Trust, its Book.*
Bridge, J. H.: *Inside History of the Carnegie Steel Co.*
Baker, C. E.: *Trusts and the People.*

Dodd, S. C. T.: *Combinations: their Uses and Abuses.* (A eulogy of the Standard Oil Company by one of its attorneys); also *An Inside View of Trusts*, circulated free of charge in the interests of the Standard Oil Company.

TRANSPORTATION

GROUP 1

Hadley, A. T.: *Railroad Transportation.*

Johnson, E. R.: *American Railway Transportation.*

GROUP 2

Reports (Annual) of the Interstate Commerce Commission.

Report of the United States Industrial Commission.

Meyer, B. H.: *Railway Legislation in the United States.*

Stickney, A. B.: *The Railway Problem.*

Dixon, F. H.: *State Railroad Control.*

Jeans, J. S.: *Waterways and Water Transport.*

Johnson, E. R.: *Inland Waterways.*

Lewis, G. H.: *National Consolidation of Railways.*

Newcomb, H. T.: *Railway Economics.*

CORPORATIONS AND CORPORATION FINANCE

GROUP 1

Cleveland, F. A.: *Funds and their Uses.*

Meade, E. S.: *Trust Finance.*

Pratt, S. A.: *The Work of Wall Street.*

GROUP 2

Report of the Chicago Conference on Trusts.

Burdick, F. M.: *The Essentials of Business Law.*

Greene, T. L.: *Corporation Finance.*

Cook, W. W.: *The Corporation Problem.*

Emery, H. C.: *Speculation on the Stock and Produce Exchanges of the United States.*

COMMERCIAL GEOGRAPHY

GROUP 1

Adams, C. C.: *A Text-book of Commercial Geography.*

Redway, J. W.: *New Basis of Geography.*

Trotter, Spencer: *The Geography of Commerce.*

GROUP 2

Reports of the Department of Commerce and Labor (U.S.), especially Commercial Relations of the United States; Consular Reports; Monthly Summary of Commerce and Finance.

Twelfth Census of the United States.

Chisholm, G. G.: *A Handbook of Commercial Geography.*

Keltie, J. S.: *Applied Geography.*

In addition to the books mentioned in the preceding paragraphs, students will find certain general works of reference of very great value. These may be most conveniently listed under the names dictionaries, periodicals, and general treatises. Every school that aspires to the possession of a working library in our subject should have a considerable number of the books in the following list, together with some of the magazines of most general use in the subject. In the first two groups the books and magazines respectively are given *in the order in which the authors would recommend their purchase.* For obvious reasons it has not been deemed best to do this in the case of the books mentioned in Group Three, which are therefore given in the alphabetical order of their authors. The student will not find in this book any references to German, French, or Italian authorities that have not been translated. Should he have occasion, in exceptional cases, to refer to such works, he should consult the bibliographies that are to be found in many of the general treatises included in our list.

DICTIONARIES

Dictionary of Political Economy. Edited by R. H. Inglis Palgrave.

Cyclopedias of Political Science and Political Economy. Edited by J. J. Lalor.

Cyclopedias of Social Reform. Edited by W. D. P. Bliss.

The standard encyclopedias will also be found to contain special articles on very many economic topics.

PERIODICALS

Publications of the American Economic Association.

The Quarterly Journal of Economics.

Political Science Quarterly.

The Yale Review.

The Journal of Political Economy.

Annals of the American Academy of Political and Social Science.

Municipal Affairs.

Commercial and Financial Chronicle.

Bradstreet's.

Dun's Review.

The Bankers' Magazine. (American.)

GENERAL TREATISES

Andrews, E. B.: *Institutes of Economics.*

Bullock, C. J.: *Introduction to the Study of Economics.*

Devine, E. T.: *Economics.*

Cannan, E.: *Elementary Political Economy.*

Ely, R. T.: *Outlines of Economics;* also *Introduction to Political Economy.* (Revised Edition, 1901.)

Davenport, H. J.: *Elementary Economics.*

Gide, C.: *Principles of Political Economy.* (Translation.)

Hadley, A. T.: *Economics.*

Hearn, W. E.: *Plutology*.

Marshall, A.: *Principles of Economics*; also Marshall, A. and
E.: *The Economics of Industry*.

Nicholson, J. S.: *Principles of Political Economy*.

Roscher, W.: *Political Economy*. (Translation.)

Seager, H. R.: *Introduction to Economics*.

Sidgwick, H.: *Principles of Political Economy*.

Walker, F. A.: *Political Economy*. (Advanced Course.)



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